

DECEMBER 1926 ~ No 251

Monthly

A Reference for Buyers

HITCHCOCK'S
**MACHINE
TOOL
BLUE BOOK**

25,000

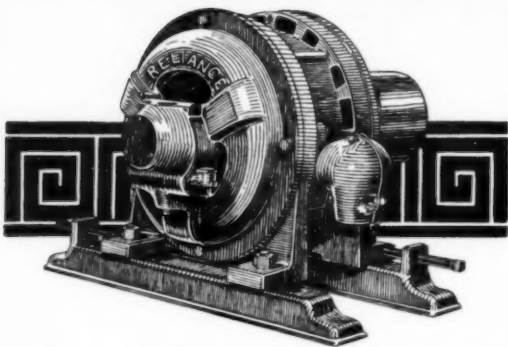
Controlled Circulation

Published By

HITCHCOCK PUBLISHING CO.

508 So DEARBORN ST.

CHICAGO



We are daily coming into contact with jobs that can be done better and quicker with motor drive and suitable control. Many users have found our experience helpful. We shall be glad to work with you and take our chances on showing you how to get results that will justify an investment in Reliance Motors.

Reliance Electric & Engineering Co.
1050 Ivanhoe Road, Cleveland, Ohio

Branches:

Boston
Cincinnati

New York
Detroit

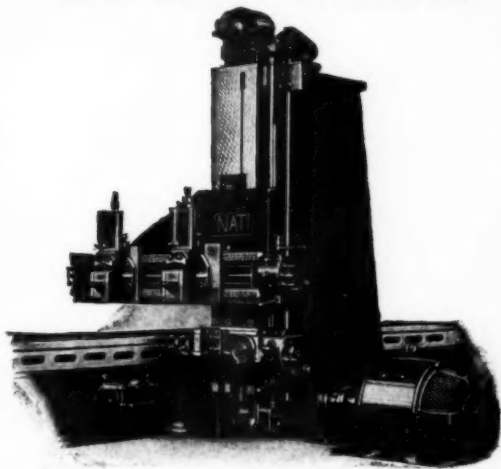
Philadelphia
Chicago

Pittsburgh
Birmingham, Ala.

We specialize in motors, sizes 1/2 to 250 h. p. constant and adjustable speed D. C.; squirrel cage and slip ring A. C.

RELIANCE ^{AC} _{DC} MOTORS

CINCINNATI HYPRO OPEN SIDE



High Production Features:

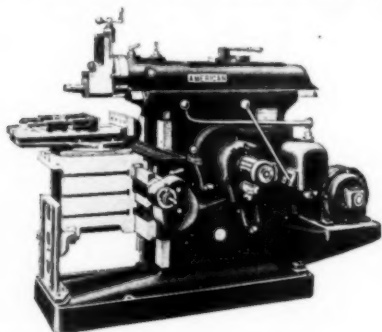
**Selective Dial Feed
Rail Clamping Device
Instantaneous Rail Lift
Rapid Power Traverse
Forced Lubrication
Combination Steel
Herringbone and Spur Gear Drive
Long Inverted Dovetail Down-Slide**

The Cincinnati Planer Co.

Cincinnati, Ohio

The New American Auto-Oiled Shaper

The Last Word in Shaper Design



ITS 12 POINTS OF EXCELLENCE:

- Tremendous Cutting Power**
- Unparalleled Rigidity—Permanent Accuracy**
- Automatic Forced Lubrication**
- Multiple Splined Shafts—Timken Roller Bearings**
- Multiple Disc Clutch and Brake**
- “V”-Type Ram—Improved Table Support**
- Helical Gears, Alloy Steel, Hardened**
- Tu-Piece Bull Wheel—Centralized Control**

If you are interested in a Shaper with greater weight, greater power, greater productive capacity, and with every possible operating convenience, in order that your work may be done faster and better and with greater profit, at least *investigate the “American Auto-Oiled.”* It will be a pleasure to tell you all about it. If you write us *now*, it cannot slip your memory.

The American Tool Works Company

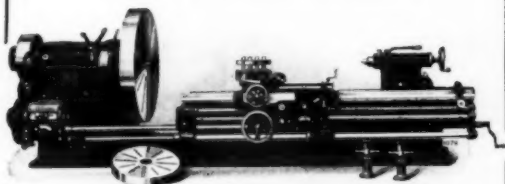
Cincinnati, Ohio, U. S. A.

LATHES

RADIALS

SHAPERS

LeBLOND SLIDING BED GAP LATHES



Designed to meet the requirements for a heavy duty universal lathe of adjustable capacity. The bed is of compound form, in two sections, the upper section being slidable along the lower section, providing an increased swing over the gap and any necessary distance between centers.

Built in three sizes with cone driven or geared headstock, described in detail in our literature.

**THE R. K. LeBLOND MACHINE
TOOL COMPANY**

CINCINNATI,

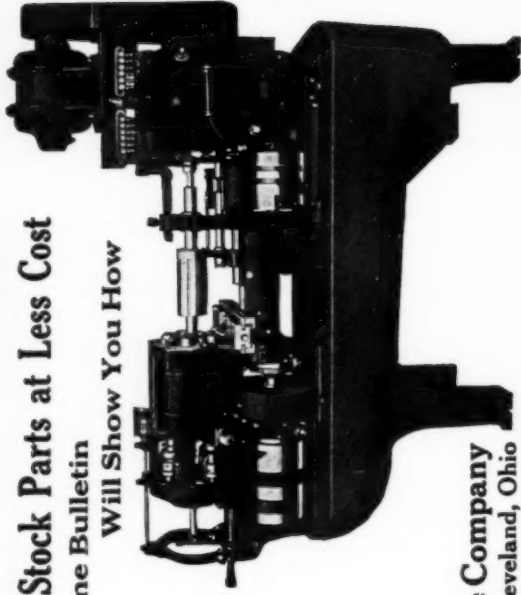
OHIO

Produce More Bar Stock Parts at Less Cost

The Model C Acme Bulletin

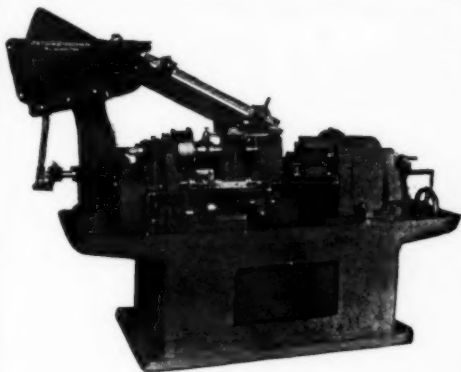
Will Show You How

Write to-day for a copy of the new Model C, Five Spindle Acme Bulletin. It will describe equipment with which other manufacturers have cut their costs—often to a very large extent.



Get this *FREE BOOK*

The National Acme Company
700 East 131st St., Cleveland, Ohio



"This is Production"

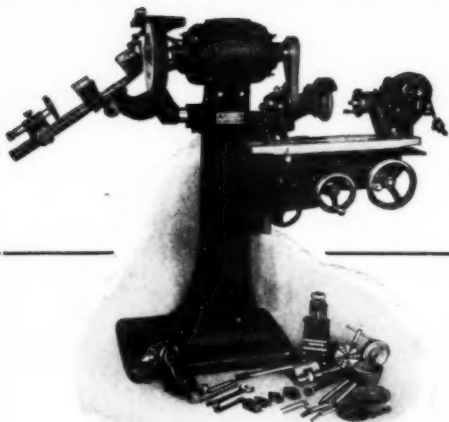
**2800 Pointed and Threaded
 $\frac{1}{2}$ " Bolts Per Hour—
One Operator!**

WHEN USING

**Four Economy Automatic Combined
Pointing and Threading Machines.**

**Capacity $\frac{1}{4}$ "x1" to $\frac{3}{4}$ "x $5\frac{1}{2}$ "
Bolt and Cap Screws.**

**The Economy Engineering Company
WILLOUGHBY, OHIO**



**Grand Rapids No. 2 Universal
Cutter, Tool and Drill Grinder**
With Self-Contained Motor Drive

An ideal machine for the shop whose requirements do not demand larger or single-purpose machines.

As a drill grinder it gives equal lengths and correct angles to the cutting lips, with proper clearance, etc., insuring maximum drilling capacity.

And it grinds with the highest efficiency any type of cutter, reamer, etc., that any grinder will handle with its special equipment, within its capacity as to size.

Write for the Bulletin

Gallmeyer & Livingston Co.

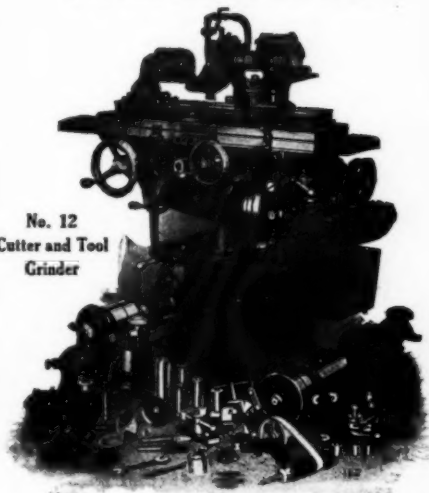
342 Straight Ave., S. W., Grand Rapids, Mich.

Manufacturers of Grand Rapids Drill Grinders, Cutter and Tool Grinders and Tap Grinders. What do you need?

Cutter and Tool Grinders

For All Classes of Work

No. 12
Cutter and Tool
Grinder



The Nos. 10, 11 and 12 give a range of sizes that will take care of any kind of cutter and tool work as well as light cylindrical grinding.

Let us recommend the proper sizes for your work

LANDIS TOOL COMPANY
Waynesboro, Pa.

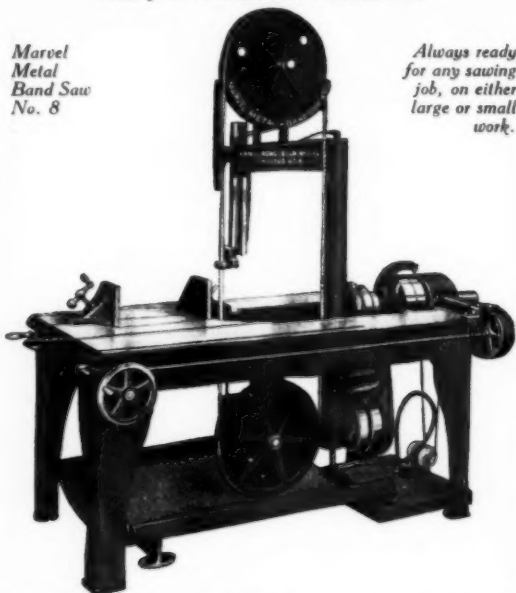
New York Office: 30 Church Street Detroit Office: 5928 Second Blvd.
Chicago Office: 618 W. Washington Blvd.

The Marvel Metal Band Saw

Write for big list of satisfied users,
Many of whom have reordered

*Marvel
Metal
Band Saw
No. 8*

*Always ready
for any sawing
job, on either
large or small
work.*



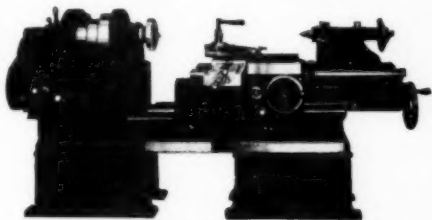
UNIVERSAL in its adaptation to every variety of metal sawing. It saws bars, beams, channels, tubes, etc., rapidly and accurately; and does the finest tool room work. Saws at an angle either way without swinging the bar around the shop. Has big capacity up to 18". The large bed gives lots of room for material and tools. A saw for every need.

Write for Circular or the Complete Catalog of MARVEL Saws

Armstrong-Blum Mfg. Co.
341 N. Francisco Ave., CHICAGO, ILL.

Sturdy Versatility

For Railroad and Jobbing Shops



Rahn-Larmon 18" to 36" Extension Bed Gap Lathe

Where versatility and sturdiness are the requirements, the Rahn-Larmon Lathes give exceptional satisfaction. That is why they are widely used in railroad and jobbing shops.

It is so stoutly constructed that it will absorb the shocks arising from the heaviest cuttings—yet there is no reasonable limit to the work it will do without special setting up or tearing down.

The initial expense is small, its versatility does away with extra equipment, and by materially increasing the output, it cuts labor and operating costs to the minimum.

Made in sizes 18"/36", 22"/40" and 28"/50" for A. C. or D. C. motor drives.

*Tell us your requirements and we will
show you how to cut your costs*

The Rahn-Larmon Co.
Cincinnati, Ohio

.... oil-groove bearings like these—*four a minute!*



The Cisco Oil Grooving attachment is handily attachable to any lathe 16 to 20 inches inclusive, cuts a single or double oil groove of figure eight type inside or outside the bearing, the style of groove being readily changeable by the operator.

Range of Work



Effective and efficient on small or large quantity production. The range of the regular machine is 6 inches in stroke length, but this can be lengthened depending upon the size machine mounted on. The diameter of the work to be oil grooved, is not controlled by the attachment, but by the size of the machine and chuck used to hold the work. Any standard lathe chuck can be used. *The time required for putting an oil groove in a brass bush 2 inches long and 2 inches in diameter, in and out of the machine is about four pieces per minute.* The depth of the groove is controlled entirely by the operator through the cross slide and the groove can be made as shallow or deep as desired.



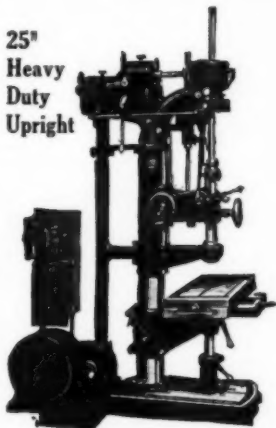
This is the most convenient and economical device available for oil grooving. It is a time-saver and money-maker wherever installed. Write for bulletin and prices.

The Cisco Machine Tool Co.
1700 Elmore Street, Cincinnati, Ohio

Drilling Their Way to Success

Fosdick Drilling Machines

**25"
Heavy
Duty
Upright**



Uprights

21" to 30", capacity 3/16" to 3". See illustration.

Radials

All geared high speed to heavy duty, 2 to 6 ft., cap. 3/16" to 4" drills.

Balanced Arm, motor driven, 4 to 6 ft.

High Speed Sensitive, 3, 3½ and 4 ft., for drilling and tapping, capacity to 1".

Ball Bearing Sensitive

16" to 24", 1 to 6 spindle, capacity to 1½", also 13" Superspeed.

The Fosdick Heavy Duty Upright was designed to meet a demand for a drill that could stand heavy duty work, and it has!

Power? Enough to drive the best high speed drill far beyond its limit. It is marked by quality clean thru, from the heavy, extra-deep base to the hammered, high carbon steel of its spindle. It is made to stand up under the severest tests, and to so combine accuracy with speed that a maximum production is the result.

Each Fosdick goes thru rigorous inspections before it is passed out, and comes to you fully guaranteed.

Write for the handsome illustrated Catalog

It may suggest many economies

The Fosdick Machine Tool Co.
CINCINNATI, OHIO

profit 5 ways

accuracy
speed

Each of the 20 types and sizes of Avey Sensitive Drilling Machines represents the absolute minimum drilling cost over many years. Each will give you "lowest cost per hole" because it has

1. Greater accuracy.
2. Higher capacity.
3. Lower drill cost, with maximum efficiency of high-speed drills.
4. Wider range of work.
5. Lower upkeep and operating cost with longer life.

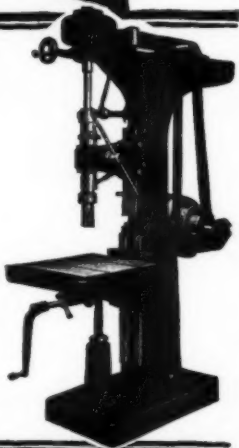
Put your drilling problems up to us.
May we give you the facts?

Ask for bulletin

The Avey Drilling Machine Co.

Cincinnati, Ohio

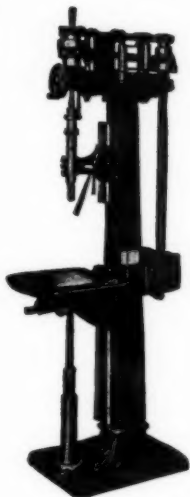
Representatives in principal cities



Avey

for
economical
drilling

FOOTBURT



A Single Spindle Footburt Sipp Sensitive Drill

**Made in three
sizes of single
and multiple
spindle models**

More holes with this machine

Why? Because you can change speeds in two seconds or belts in ten seconds—because the automatic idlers keep the belt pulling to capacity at all times—because the full ball bearing equipment and accurate machining gives a smooth, fast cut.

Write for No. 650 Folders

The Foote-Burt Company, Cleveland, O.

FOOTBURT

Demco
Drills



Vertical Motor Drive Drill Model—DV

Ball Bearing throughout.
Single or multiple speed.
4 speeds available instantly
through drum type controller.
1 to 8 spindles.
 $\frac{1}{16}$ " to $\frac{1}{2}$ " capacities.
Floor or bench type.

The Best Sensitive Drill Made

Why? Because—

It has a rigid spindle bearing.

A spindle that compensates for
its own wear.

A spindle without lost motion.

No spindle adjustment required.

Model—DV, Single Spindle Floor Type.

Send for Bulletin DV

Sold through machinery dealers in all principal cities.

Merit Oil Equipment Co.

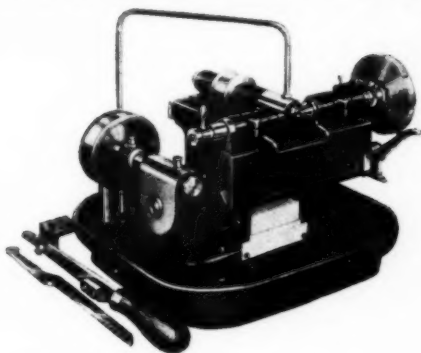
Main Office and Factory:

6616 Morgan Ave.,

Cleveland, Ohio

**SLOAN
and
CHACE**

Precision Tools



Automatic Pinion Cutter

Standard capacity 1"x1". Special sizes to order.

This Automatic Cutter for Pinions and Spur Gears combines the utmost rigidity with unusual delicacy of precision.

The automatic cutters, fixed to a stationary spindle, play in turn upon the pinion to be indexed. Wear and use cannot lessen their efficiency, as the depth to which each works can be independently regulated.

Made in three types, each is designed to satisfy the most exacting requirements of every job within its capacity, and to give unusual rapidity of production.

Let us know your needs; we'll do the rest.

Sloan & Chace, Inc.

361 Sixth Avenue,

Newark, N. J.

"Tapping by Air—

Has taken the place of 18 men"

—Writes One Purchaser

**Triples
Production**

Carry out—
automatically—
the old ideal
of accuracy
involved in
hand tapping,
yet increase
your production
300%.



**High Speed
Pneumatic
Oscillating
Tapping
Machine**

*Tell us your
requirements
and we will
make a
guaranteed
production
estimate.*

W. GATERMAN MFG. CO., Manitowoc, Wis., U.S.A.



The Tool For Busy Shop Men



The Rhodes Shaper and Slotter

A few turns of the wrench, and this efficient shaper is converted into a fast, accurate slotter. This may be done without resetting the job.

The Rhodes is equipped with all the essential features of large machines, yet its special design enables it to handle all work within its capacity with greater facility.

Thruout the quality of the Rhodes is of the highest grade, yet it is so reasonably priced, and has such a low operating cost, that no shop can afford to be without it.

*Ask your dealer or write for
CATALOG H22*

The Rhodes Mfg. Company
944 Park Road, :- Hartford, Conn.

SHAPERS—RHODES—SLOTTERS



Threading at 3000 R. P. M.

These rods are being threaded with a No. 8-32 thread 5-16" long, at an average production of 1400 pieces per hour on our Standard High Speed Tapping Machine.

How about your threaded work?

Leland-Gifford Co.
Worcester, Mass., U. S. A.

BRANCH OFFICES:

Boston
Cleveland

Chicago
Detroit

New York
Rochester



Spring Press

(UNIFORM BLOW)

Foot or Power

Single and Double Action

These new dependable Presses are used in large numbers by manufacturers of—

**Electric Devices, Toys,
Jewelry, Clocks, Cutlery,
Hardware, Radio Sets,
Instruments, Etc.**

The Uniform Blow is a very special feature—it increases production and eliminates costly inspection. Investigate.

The Taylor & Fenn Co.

Hartford, Connecticut, U. S. A.

*Do your Hack Saw Blades break?
Or do they wear out too fast?*

Use the New Patented

Marvel High-Speed-Edge Hack Saw Blade

For Use In All Power Machines
Genuine High Speed Steel Cutting Edge
Positively Unbreakable



[Made in 12, 14, 17, 18,
21 and 24 inch lengths.]

[6, 8, 10, and 14 teeth
to the in., in all lengths.]

Ten Points of Superiority

1. Guaranteed.
2. Original, patented.
3. Cuts twice as fast.
4. Positively unbreakable.
5. A straighter, truer cut.
6. Most economical, most efficient.
7. New form machine cut "raked" teeth.
8. Genuine high speed steel cutting edge.
9. At least six times the amount of cutting.
10. Modern methods of manufacturing assure uniformity.

A remarkable invention and the development of original methods of manufacture have produced this latest improvement in metal cutting tools—the acme of metal cutting efficiency and economy.

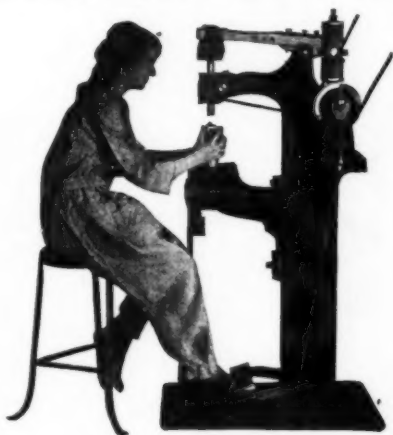
Once tried—always used. Complete details and prices on request

ARMSTRONG-BLUM MFG. CO.
341 N. Francisco Ave., CHICAGO, ILL.

Cold Riveting

By

The High Speed Hammer Method



Strong, well finished heads on rivets, pins, studs, etc. 1-64" to 1½" in diameter.

SEND RIVETING SAMPLES

Write for our Catalog "C"

**The High Speed Hammer Company, Inc.
Rochester, N. Y., U. S. A.**

TIME SAVERS THAT PAY



ENLARGED THE INCH

IT
COSTS
5¢

To Sharpen
a Saw on
one of these
Machines

MODEL J

Resharpens all
soft or medium
tempered Circu-
lar Saws.

THAT'S WHY—

American Brass	have 19
American Hard Rubber	have 10
Continental Fibre	have 23
Formica Insulator	have 10



MODEL E

Salvages all
Cold, Milling,
Slitting and
Screw Slotting
Saws.

THE WARDWELL MFG. CO.

Specialty Manufacturers of the largest line of Saw Filers made in the U. S. A.
108 Hamilton Ave.,
Cleveland, Ohio

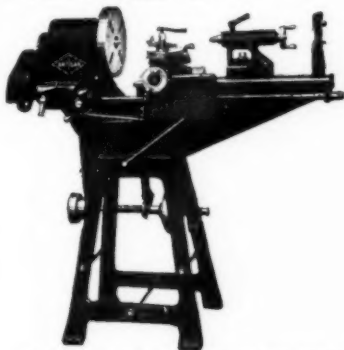
Unmatched In Value !

For more than four years, the "Artisan" Lathe has been the outstanding value in the Small-Lathe field. **FIND OUT FOR YOURSELF—**

IF any other Lathe, within \$150.00 of its price, will turn out as great a volume or variety of actual Lathe-work.

IF any other Lathe, within \$300.00 of its price, is more modern in design, more compact in construction, or more distinctive in finish and general appearance.

IF any other Lathe, **AT ANY PRICE**, is backed by a more dependable guarantee of complete satisfaction to the purchaser.



*Isn't it worth while to have full particulars
of this machine before you ?*

Think it over.

Then write to:

Artisan Manufacturing Company
837 West Sixth St., CINCINNATI, OHIO



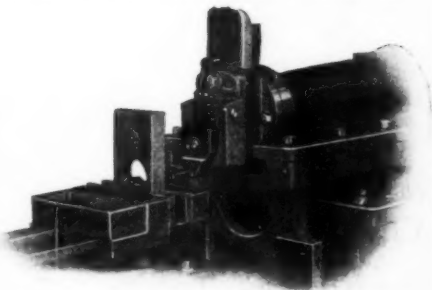
This one mandrel, the No. 4 size, will take every fractional part of an inch from 2" to 2½". It would require 32 solid mandrels to do this in 64th sizes, and intermediate sizes could not be taken. Better order a few "Nicholsons."

Write us for further information.

W. H. Nicholson & Co., 117 Oregon St., Wilkes-Barre, Pa.

Bruno Slotting Attachment A Cutting Tool Holder

**Which Converts Your Shaper Into
a Horizontal Slotter and Makes
Possible the Most Intricate Shaping**



Special Introductory Price

\$15.00

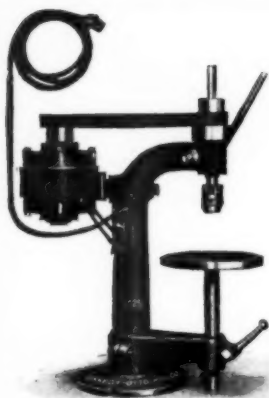
F. O. B. Rochester

Standard Cutting Tools \$1.50 each

SENT ON APPROVAL

H. A. Moore Company

Rochester, N. Y., U. S. A.



Drills to the center of
a 10" circle.

Capacity, $\frac{3}{8}$ " diameter.

Up and down run of
spindle, $2\frac{1}{2}$ ".

Up and down run of
table, 7".

\$44.00

110 volt, 60 cycle,
single phase. Other
voltages on application.

**Ready for the
Job**

The No. 29 Motor Driven Bench Drill is furnished complete with $\frac{1}{4}$ H. P., vertical type, ball bearing motor, attached in such a manner which permits it to slide in or out, thereby giving a very convenient means of obtaining proper tension of the belt. Toggle type switch, extension cord and socket, belting and chuck.

The design eliminates the use of gears and operates at high speed entirely free from both noise and vibration.

All parts are accurately machined, pulleys are well balanced for high speed. The spindle is accurately ground, equipped with ball thrust bearing and chuck, which is accurately fitted to insure true running of drill.

Canedy-Otto Manufacturing Company

Main Offices and Factory—Chicago Heights, Illinois

New York Branch
407 Broome St.

Complete stock
carried at branches

San Francisco Branch
955 Folsom St.

By Merit

Barber-Colman CUTTERS

Should be your choice

At the Chicago Steel Show a Barber-Colman spiral plain milling cutter milled 520 linear feet without sharpening, taking a cut $3\frac{1}{2}$ " wide, $\frac{1}{8}$ " deep at 21.4 inch feed per minute. The material was S. A. E. 1035 steel which is .30 to .40 carbon.

BARBER-COLMAN COMPANY

General Offices and Plant

ROCKFORD, ILL.,

U. S. A.





STYLE L
20 SIZES



STYLE O
24 SIZES



STYLE E
13 SIZES



STYLE Q
5 SIZES



STYLE R
21 SIZES



STYLE KV
18 SIZES

GITS BROS.

Standard of Comparison

Better Oilers

Quality-Schedule Delivery-Price

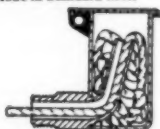
Gravity and Wire Wick Feed Oilers

Gravity Feed—flushes the bearing.
Wire Wick Feed—gives desired prolonged feed.

Wire Wick—replaces waste or felt.
Made in Standard sizes.



STYLE WC
7 SIZES



STYLE W
8 SIZES



STYLE WT
3 SIZES



STYLE AOR C
11 SIZES



STYLE OG
7 SIZES

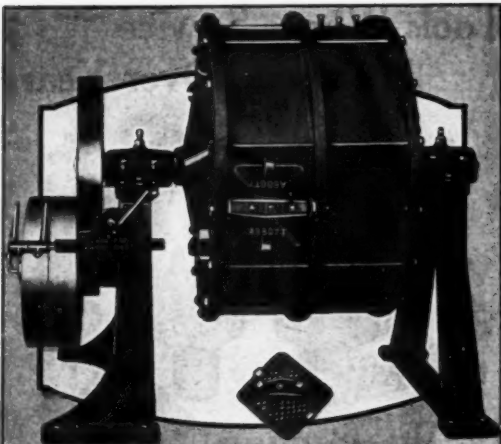


STYLE WY
5 SIZES

Catalog Sent on Request

Gits Bros. Manufacturing Co.

1940 S. Kilbourn Ave. Chicago, Ill.



Barrel Burnishing is Better Burnishing.

Frequently, the finishing department is the "neck of the bottle". Possibly your finishing department slows up your output. In any event, if you have small metal parts to finish, either before or after plating, the chances are you can do it better, faster and at lower cost by adopting the Abbott Method of Ball Burnishing.

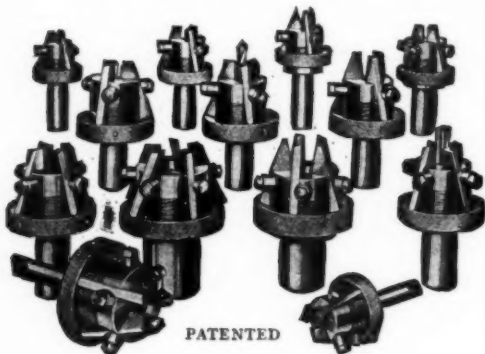
Send us samples of parts you have to finish. Put it up to us, without obligating you, to *show* you how to do better polishing at a lower cost.

THE ABBOTT BALL COMPANY

"Originators of Commercial Ball Burnishing"

1043 New Britain Ave., Hartford, Conn.

Tools Whose Service Is Figured Over Years



Genesee Adjustable Hollow Mills pare replacement costs, by reason of their serviceability.

Made in seven sizes, they cover the range from $\frac{1}{4}$ to 2 inches. Each set of blades will machine all sizes within its scope to 1000th of an inch.

Built to keep machines at their capacity output, one set will outlast from five to seven solid tools—then, too, the blades can be replaced at a small cost.

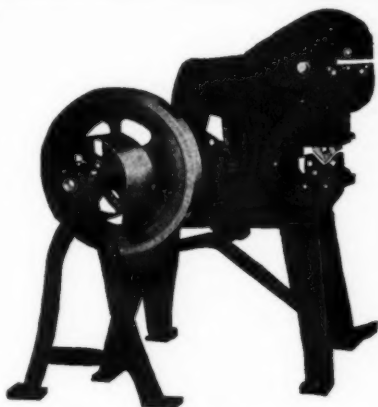
For finishing forgings and castings they are the ideal tool. Their blades can be ground to any angle required to point work, or turn sharp tapers. No matter how they are used they never change in size, become clogged with chips, or lose their efficiency.

Let us tell you how we have cut the operating costs for hundreds of manufacturers.

Genesee Manufacturing Co., Inc.
Rochester, N. Y., U. S. A.

Manufacturers of Genesee Rapid Production Tools.

Est. 1908



No. 52—Built in Seven Sizes
BELOIT
Combined Power Punches and Shears
Series 51 to 56

The Beloit Combined Power Punches and Shears offer an unequalled combination of simplicity of design, construction, range of capacity, and moderate initial cost.

Invaluable in any plant for punching, shearing and fabricating steel bars or structurals.

An indispensable equipment for the manufacture of automobile springs and bumpers.

Tell us about your Punching and Shearing requirements. Our line is extensive, and we have a Beloit Machine for your work.

Send for our new catalogue No. 11 which describes the Beloit line of Punches, Shears and Bending Rolls.

Hendley & Whittemore Co.
100 S. State St., -:- -:- **BELOIT, WIS.**

Simplicity—

Keynote of the Catlin Keyseater

With less than half the number of parts of other keyseaters, Catlins are proportionately simpler machines to operate. Any average mechanic can produce top-notch results with a Catlin.

They have been found thoroly successful in automobile plants, government shops, navy yards and many big factories, both at home and abroad.



The machine shown here takes care of the needs of most machine shops. The stroke is adjustable up to 13", and it cuts keyseats from 1/16" to 1 1/4". Our other sizes will do all the keyseating that may come up in any shop or ship yard.

Economy

On some classes of work it is possible to keyseat piece after piece without clamping down the work, or stopping the machine.

Catlins are making new records right along—why not have them save time and money in your shop?

Let us mail you the interesting folder, describing the various sizes, including their capacities

Chattanooga Machinery Company

2401 Bennett Ave., Chattanooga, Tenn.

PEERLESS SURFACING MACHINES

for
**Grinding and Finishing
Flat Work**

**4" Bench
Model**



**Larger Machines in Both
Horizontal and Vertical Styles**

SEND FOR FOLDER

PEERLESS SURFACING MACHINE CO., Inc.
TROY, N. Y.

The Western Adjustable Vise



*It pays
real
profits!*

See the seven
reasons below

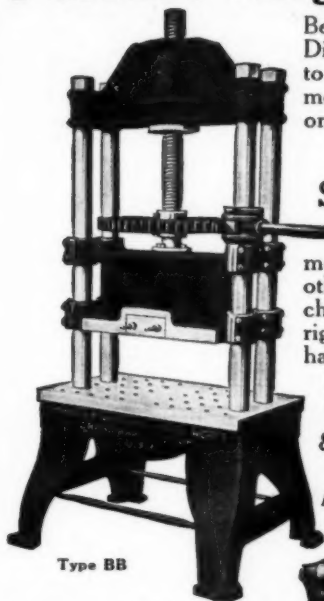
Here are seven of many reasons why it pays:—

- (1) No limit to number of positions in either elevating or swiveling.
- (2) Easily and quickly positioned, and one lever locks all swivels.
- (3) It does not jump or rattle under chiseling or hammering.
- (4) It handles odd shaped pieces as well as ordinary shapes.
- (5) Any piece of work can be reached from all directions.
- (6) It leaves no excuse for spoiled work from not seeing lines.
- (7) It enables the vise hand to do more work and more accurate work.

*Write for Catalog, which describes this superior Vise, as well
as Champion Tool Holders, Expanding Mandrels, etc.*

The Western Tool & Mfg. Co.
Springfield, Ohio

Perfect Alignment



Type BB

Between Punch and Die enables one man to do speedier and more accurate work on this

Four Post Screw Press

than two men can do on any other type of machine. Sensitive and rigid in operation, it has power to shear in any die within its capacity.

**80 tons pressure—
table 20"x36"**

Also three smaller sizes

Surface Grinder

Silent efficiency is the action of this powerful and rigid surface grinder—equipped with graduated feeds and all the latest attachments.

Price and details on inquiry

**JARECKI MACHINE
AND TOOL CO.**

Department A

GRAND RAPIDS,

MICHIGAN



HARDINGE

The Cataract Line

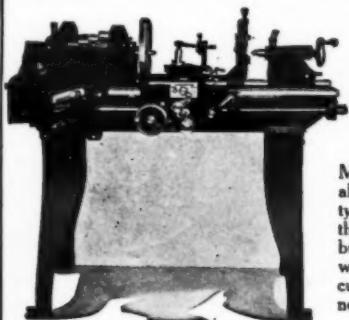


For Supreme Service—

Because they meet the modern demand for superior accuracy and workmanship—ask for catalog

Hardinge Brothers Inc.

4149 Ravenswood Ave. Chicago Ill.



Another Sidney Lathe

Our 11" x 4"
Medium Pattern,
all geared head
type. It is up to
the minute with
built-in features
which insure ac-
curacy and eco-
nomical service.

Write for catalog and prices on the complete
line of Sidney Lathes. Address Dept. 1801

The Sidney Machine Tool Co.
Sidney, Ohio



USE the CHICAGO No. 2
POWER PIPE THREADING MACHINE



For
**Production
and Precision
Threading**
PORTABLE

Capacity:
 $\frac{1}{4}$ " to 2" Pipe
 $\frac{1}{2}$ " to $1\frac{1}{2}$ " Bolt

Featuring:

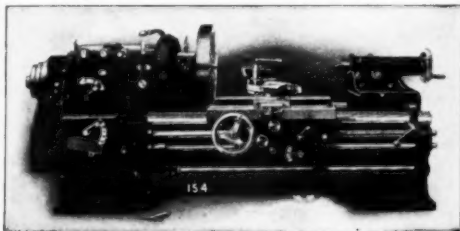
1. Quick Die Change
2. Automatic Die Head
3. Three Speeds
4. Perfected Oil Control

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**Chicago Pipethread
Machine Co.**

Office and Factory: 1623 Racine St., Racine, Wis.

Experienced Buyers



know that in Cincinnati Lathes they obtain the design, materials and workmanship not equaled in higher priced machines. Sizes to swing from $16\frac{1}{2}$ " to 32 inches. Cone type or geared head so equipped to machine your particular work always most economically.

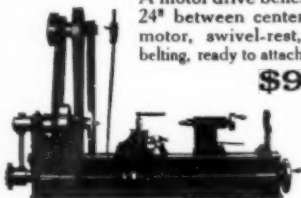
THE CINCINNATI LATHE & TOOL CO.
3207-3211 North St., Oakley, Cincinnati, O.

Just-Rite Lathes

Made in Sizes from 10-in. to 20-in.

A motor drive bench lathe, 10" swing, 24" between centers, complete with motor, swivel-rest, center rest and belting, ready to attach to your light socket.

\$98



Has Power Feed

JUST-RITE
for turning,
boring, mill-
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cutting).

Order one by express. Weight, 230 lbs.

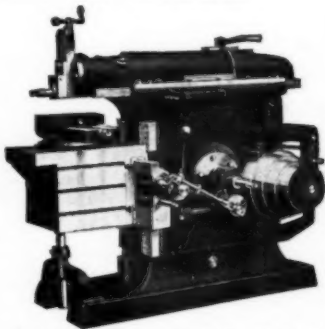
A. V. Carroll Machine Tool Co., Norwood,
Cincinnati, O.

SHAPERS

12", 14", 16"
Plain Crank.
16", 20", 25"
B. G. Crank,
either Cone
Driven or
through Speed
Box.

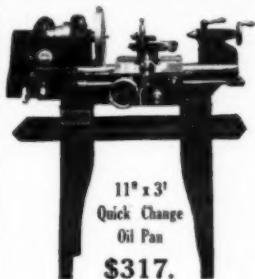
Belt Shifter
Regular Equip-
ment All Cone
Driven Shapers.

32" Back Gear-
ed Crank, Sin-
gle Pulley
Drive.



The Smith & Mills Co., Cincinnati, O., U.S.A.

Monarch Jr. Lathes



11" x 3'
Quick Change
Oil Pan
\$317.

are the smallest members of the Monarch lathe family. Yet they are the "biggest little lathes" built.

The Monarch line of lathes includes all sizes and types from the little 9-inch Junior lathe to the big, massive 30-in. lathe. In this line there is a lathe to fill your requirements at the price you want to pay.

Send for Catalog

The Monarch Machine Tool Co.

206 Oak Street, Sidney, Ohio

Cleveland Open Side Planers

Dial Feed; Power Rapid Traverse;
Single Turn Rail Clamp;
Automatic Trip to Rail Raising
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Herringbone Gears on Inter-
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Self oiling Bushings through-
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Box Tables; Im-
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Forced Feed Lubri-
cation to Vees.

**Over 1070
Installations**

*Send for descriptive
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26' to 72'

The Cleveland Planer Co.,

3148 Superior Avenue,
CLEVELAND, OHIO

Established in 1900



Atlas Arbor Presses

For All Forcing Operations

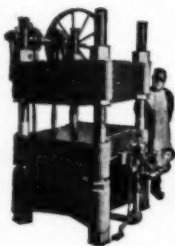
Illustration shows our No. 55 Power Drive Press, which is adaptable for fast production work and capable of supplying ten tons pressure.

*Write for our Bulletin—
showing 30 different sizes*

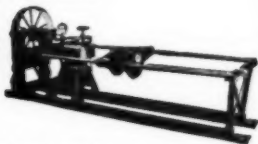
Atlas Press Co.

*Department B,
Kalamazoo, Michigan*

Lourie Hydraulic Presses



A complete line of Horizontal and Vertical Presses built for any tons capacity or specifications. Either hand or power operated.



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LOURIE HYDRAULIC CO.
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ARMSTRONG DROP FORGED WRENCHES

High-Grade Wrenches of All Kinds and Sizes



We also make—all of Armstrong quality—

Tool Holders
Ratchet Drills
Drilling Posts
Drill Drifts

Drill Vises
Lathe Dogs
Clamps
Planer Jacks

Bolt Drivers
Tool Posts
Drill Sleeves
and Sockets

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Armstrong Bros. Tool Co.

"THE TOOL HOLDER PEOPLE"

308 N. Francisco Ave., Chicago

The BARKER GENERAL PURPOSE VISE

For Planers, Shapers, Drilling and Milling Machines



Two Sizes

Width of jaws 11½"–12"
Depth of jaws 2½"–3"
Jaws open 8"–12"
Weight 180–210 lbs.

Also 16" Mold Makers' Vise

OUR MOLD MAKERS' VISE has 13" width of jaws, 7" depth, and jaws open 16"—weight 290 lbs.

ALL BARKER VISES are made extra heavy, with steel faced jaws, and are graduated to swivel any angle. They stand lots of hard usage.

Get in touch with us before buying

WM. BARKER & CO.

Manufacturer of Machine Tools,

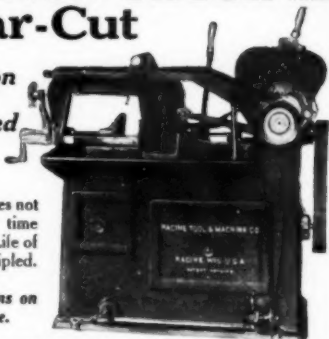
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The New RACINE Shear-Cut

*Production
Saw for
High Speed
Metal
Cutting*

Time per cut does not vary. Cutting time reduced half. Life of saw blades tripled.

Send for bulletins on complete line.



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Riveting Results—

with a
Grant Rotary



No corner is too inaccessible, nor any job too awkward for a rivet to be placed if you have a Grant. It will finish any rivet in one second, and when it's thru, the head will have that smooth, machine look, so important in giving the job a workmanlike appearance. Send us a sample of your riveting work. We will show you what a Grant will do, and at the same time show you the way to pare your production costs.

Let's get together

The Grant Mfg. & Machine Co.
C. E. Station, Bridgeport, Conn.

Curtis Universal Joints

of Simple, Rugged Construction



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BOSTON GEAR WORKS SALES CO.

Norfolk Downs, Mass.

BOSTON NEW YORK PHILADELPHIA CLEVELAND CHICAGO



BIAX

makes flexible shaft machines for drilling, boring, grinding, polishing, screw-setting, nut-setting, etc.

Also special machines for—

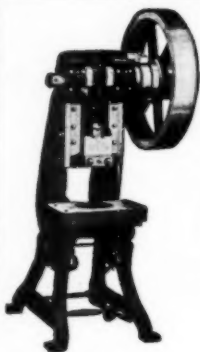
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Pattern Shops Machine Shops
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Write us today about your work, and we may be able to save you money.

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Rockford Hi-Duty Punch Presses

are deliberately built
for Hi-Production Ser-
vice and **they deliver.**

Their punch-ability will
surprise you. All types
and sizes.

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Rockford Iron Works, Rockford, Ill.



T. H. L. Punches

**Insure Continuous and
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Because they are made of the
right quality of tool steel.

Because they are hardened
with every care.

Because all our experience of
35 years is centered in mak-
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and dependable.

*Large stock of regular sizes
Special sizes quickly made*

T. H. Lewthwaite Machine Co.
311 East 47th St., (Est. 1890) New York City



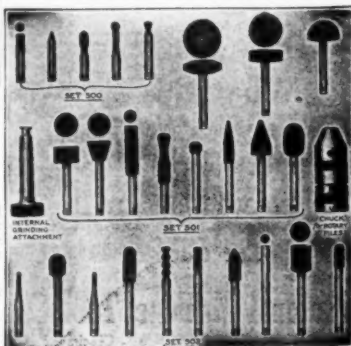
Strand Rotary Files

Used with Strand
Flexible Shaft
Machines. Are
giving excellent
service.

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CHICAGO

HIGH SPEED HAND CUT ROTARY FILES



METAL FINISHING



Mall portable electric
disc finishing machine
for sanding metal, wood,
filler, etc.

Numerous other types
of attachments and flex-
ible shaft machines can
be furnished for drilling,
grinding, screw driving,
buffing, polishing, sand-
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and cleaning. Write
today for more detailed
information.

Flexible shaft sets for any purpose, with tools to suit your work.

MALL TOOL CO., 8339 So. Chicago Ave.,
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INQUIRE

What this Fast
Keyseater Can
Do. You May
Have Use for It.

Get Catalog O

National Machine Tool Co.

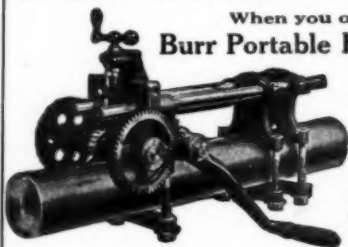
2268 Spring Grove Ave.,

Cincinnati, O.



No Need To Dismantle Your Shop

When you own a
Burr Portable Keyseater



No matter how the shaft is placed, or from what angle you have to approach it, this handy tool will do the work, cutting an accurate keyway up to 12" long in shafts 5" or less in diameter, with no trouble or special setting.

The seven sizes in which it is made can be operated either by hand or by motor.

10,000 Satisfied Users

JOHN T. BURR & SON

422 Kent Ave., Brooklyn, N. Y.

Sent on trial



The Cincinnati

**Portable Electrics
Stay on the job.**

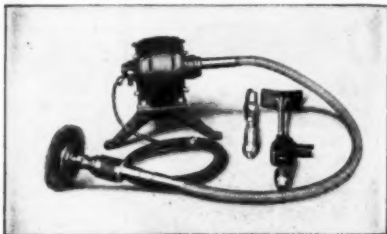
Hand and Screw Feed Drills $\frac{1}{4}$ " to $2\frac{1}{2}$ " cap.
Portable Scotch Radial Drills $1\frac{1}{4}$ " to 2" cap.
Tool-Post Grinders..... $\frac{1}{4}$ to 3 H. P.
Bench and Pedestal Grinders. $\frac{1}{4}$ to 5 H. P.
Hand and Suspended Grinders. $\frac{1}{4}$ to 3 H. P.
Polishing and Buffing Lathes. $\frac{1}{2}$ to $7\frac{1}{2}$ H. P.

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**The
Cincinnati Electrical Tool Co.
2678 Madison Road
Cincinnati, Ohio**

The Whirlwind Buffer and Grinder

**Will cut the cost on any unhandy
grinding or polishing job**



Send for our latest bulletin

**Stow Flexible Shaft Co., 3454 Ludlow St.,
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The Best Since 1876

Save Time Setting Gang Milling Cutters

Eliminate
Thin
Washers



Hardened
and
Ground

PATENTED

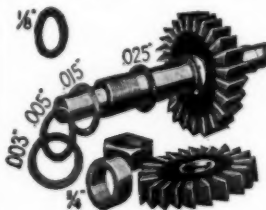
"Wear-Ever" Adjustable Spacing Collars permit setting cutters to the thousandth part of an inch without removing from the arbor.

Stock sizes for $\frac{3}{4}$ " to $2\frac{1}{2}$ " arbors, sent on approval. They are adjustable in 12 steps of $\frac{2}{1000}$ inches.

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13th and Robey Streets CHICAGO, ILL.

Steel Spacing Washers—

Made of a good grade of Cold Rolled Strip Steel, also known as Shim Steel



Stock sizes for arbors of following diameters: $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, 1, $1\frac{1}{8}$, $1\frac{1}{4}$, $1\frac{3}{8}$, $1\frac{1}{2}$, $1\frac{5}{8}$, $1\frac{3}{4}$, $1\frac{7}{8}$, 2, $2\frac{1}{4}$, $2\frac{1}{2}$, 3, $3\frac{1}{2}$ and 4 in. and larger.

Stock thicknesses: .002, .003, .004, .005, .006, .007, .008, .010, .012, .015, .020, .025, .032, .047, .063, .093 and .125 inch.

Other thicknesses up to 3.000" made to order, with keyways if so ordered.

Ask us to send samples; you'll like them

Detroit Stamping Company
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Gears That Set Standards

Years of experience, modern equipment, skilled mechanics, and specialization—these factors unite to make *Massachusetts Gears* leaders in their field.



Made in
Small
and
Medium
Sizes
Up to
3 feet
Diameter

Small and medium gears for machine tools, automobile and motor truck engines, speedometer drives, and scientific instruments, etc. Made in all materials, and achieving such quality as could alone result from unsparing effort. *Let us estimate from your drawings—quick delivery from stock.*

Massachusetts Gear & Tool Company

36 Nashua Street,

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Half a Century of Service

Collets and Blanks that Survive Time



Since 1872 the American Watch and Tool Company has manufactured collets and blanks for screw machines and step chucks. During this time they established a reputation for unvarying quality. The Wade Tool Company, recently succeeding to their business, is maintaining the same tradition of service and excellence.

Write for the Catalog of Precision Lathes and Tools

The Wade Tool Co.

49-59 River St.,

Waltham, Mass.



An "Ideal" Pump Deflates Costs

The single cylinder "Ideal" Electric Automatic Air Compressor and Exhaust Pump delivers two cubic feet of free air at 300 R. P. M. Quarter H. P. motor required for 200 lbs. pressure.

Price, pump only, \$22.50

← SINGLE CYLINDER

TWIN CYLINDER →

The twin cylinder pump delivers four cubic feet of free air at 300 R. P. M. Half H. P. motor required for 200 lbs. pressure.

Price, pump only, \$32.50

Equip your laboratory or factory with one—"Ideal" for use in connection with spray gun, glass blowing, etc.

PETRICK BROTHERS
2226 Belmont Ave., Chicago, Ill.



From the "Gusher"—

Unsurpassed Lubrication

Efficiency: Delivers from 3 to 30 gallons a minute, with the smallest consumption of power. Needs no priming.

Construction: No packing nuts, foot or relief valves to get out of order. Mechanically it is so perfected that internal friction is practically done away with, and grit or small chips can not clog it.

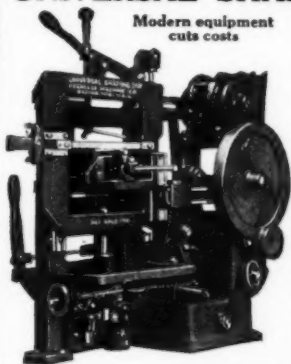
Equipped with motor for any current, also belt drives.

*Let us send you a catalog
with full particulars.*

The Ruthman Mchy. Co.

528-534 E. Front St.
CINCINNATI, OHIO

—PEERLESS— UNIVERSAL SHAPING SAW



Modern equipment
cuts costs

Different Principles
Greater Efficiency
Give The Most Of—

Speed
Accuracy
Blade Economy

SIZES:

6"x6" -- 9"x9" -- 13"x13"

PEERLESS

HIGH SPEED HACK-SAWS

6"x6" 9"x9" 13"x16"

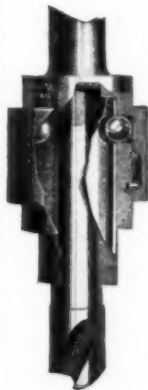
Sturdy--Efficient--Reliable

Peerless Machine Co.

1218 Sixteenth St.

Racine, Wisconsin

Write for Details



MARKING TIME

When you have a drill to change, does your shop mark time while your men search for a drift, or key? When the shank finally comes out is it scored and mutilated? Use a—

Titan Drill Chuck

and you'll never stop moving. It has all the features of the best chucks, plus one more! Simply strike the end of the drill and it slips out of the collet. Until you strike it, the chuck can be operated in any position—and it's *positive*, absolutely no slipping possible!

*Let us tell you what other
superior qualities it has*

Titan Tool Company
Erie, Penna.

**How would
you like—**

to tap small holes as easily as you drill them; to tap them 2 or 3 times faster than usual; to wear out the small taps you are now breaking?

The Ettco High Speed Tapping Attachment usually increases output 100%. When a Gun Tap can be used the increase is as high as 300%.

*Try one for 10 days—
if you can then spare
it, send it back.*

Ettco



**Try one
for 10
days**

Eastern Tube & Tool Co.
600 Johnson Ave., Brooklyn, N. Y.

The U. S.—

A 14" Sensitive Floor Drill

Designed in a machine tool shop to meet the need for a drill with a capacity up to $\frac{1}{2}$ " that will turn out accurate, rapid work at the least cost.

Price with motor,
switch and belts - **\$115**

Or with Counter-
shaft for Belt Drive **\$70**

Three speeds; spindle ground to size with ball thrust bearing, counterbalanced by weight inside column; vertical adjustment to head; tables adjustable to any type of work. Write for folder, or better still, send us your order.

The U. S. Machine Tool Co.
1952 W. 6th St., Cincinnati, Ohio



Machine Steel Discs **From Stock or Cut to Order!**



Phone, wire
or write, and
your order
will be

***Shipped
Promptly***

We can sup-
ply any size

Machine Steel Discs from 1" to 12" in diameter, any thickness, and in any quantity from one to a thousand or more. This new service will save you time and money.

Writing us for quotations places you under no obligation

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Dependable Service on Hollow Bored Forgings and Steel Shafts



If you make machines on which you use *Lathe Spindles, Piston Rods, Rams, Clutch Shafts*, or similar parts, let us quote on your requirements. Our products are right, our prices are right, and our service is dependable.

Send along your blueprints; we'll both be pleased with a trial order

**American Hollow Boring Co.
Erie, Penna.**

A Good Test

If a bootlegger will drink his own merchandise, you are taking no chances.

Burke Tools can be seen operating in our own plant six days a week.

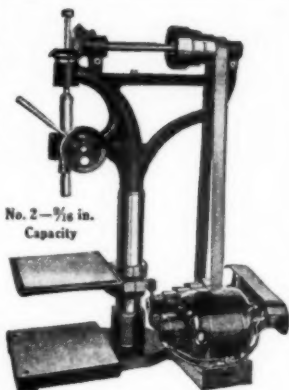
Manufacturers of Bench Drills, Milling Machines and attachments, and Tapping Machines.

Send for catalog and prices

At your service—

The Burke Machine Tool Company

297 East 16th Street
Cincinnati, Ohio



Self Salvaging Utility Interchangeable Counterbore and Facer

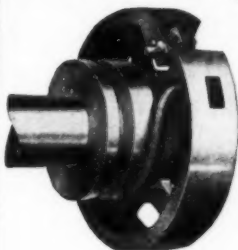
When solid tools wear out, you face solid waste. Utility tools are interchangeable—they are *self salvaging*.

The Utility Interchangeable Counterbore and Facer is designed to overcome the troubles which usually attend the use of such a tool. Its features result in unusual economies. *The pilot cannot twist off.* It is impossible for the cutters to break, and as there are no threads to jam, they are easily removed. Set screws cannot loosen.

More than materials enter into Utility Tools—21 years of practical experience, perfected manufacturing processes, rigid inspections, and our guarantee, make them what they are.

The J. C. Glenzer Company
6469 Epworth Blvd., Detroit, Mich.

A clutch experiment—

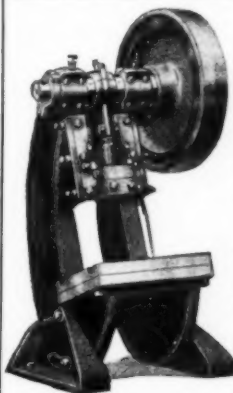


would result in your incorporating dependability into your product, in the form of

CONWAY Clutches

Get posted—write for Bulletin No. 26 today

The Conway Clutch Company
1951 Riverside, Cincinnati, Ohio



Trade **Verson** Mark

Punch Presses

are suitable for a large variety of blanking, forming, and other press operations, and handle such light work as is often done on larger presses.

One of the features is the Automatic Safety Clutch, which is a positive prevention of accidents which are due to the repeating of presses.

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LaSalle Machine Wks.
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Specializing in Small Presses and Angle Shears

Vanderbeek Universal Joints



—represent the practical refinements of 25 years experience in manufacturing Universal Joints. All parts are generous sized, fully protected against dirt, and are practically self-oiling. Exceptionally strong, they transmit full power up to 70°.

Vanderbeek Joints are in daily use on thousands of machines.

Write today for our Descriptive Catalog.

American Tool Works, Inc.
Hartford, Conn., U. S. A.



No. 2 ALTO Motor Driven Three Speed Tapping Machine

SAVES—time.
SAVES—taps.
SAVES—in the first cost and in the long run.

Its main points are—

Motor driven, 3 speed, double speed reverse, quick change, back geared friction clutch. Sensitive for small tapping and powerful enough to drive $\frac{3}{8}$ " taps through steel.

We also make smaller high speed tappers.

Write for descriptive literature and attractive prices



The Alto Mfg. Co., 1647-51 Wolfram St. Chicago, Ill.

Thor

Electric Drills

EXPERIENCE

Experience is a great teacher. In your own business you realize how much experience means in your finished product. With this thought in mind we know you will appreciate the importance of the experience we have had in the manufacture of Thor Pneumatic Tools and Electric Drills. Our catalog will interest you—it is yours for the asking.

Independent Pneumatic Tool Co.

600 W. Jackson Blvd.,

Chicago, Ill.

Speed and Accuracy *plus* Safety

The combination drill table and vise saves time. Adds accuracy. Reduces breakage and personal injury, because it is right where you want to use it. Good accident insurance for your shop.

A Safety Tool that saves its cost in labor every six months.



*Write for free
Trial Offer*

MODERN MACHINE TOOL CO., Jackson, Michigan

E-Z THREAD DIAL

Thread cutting on engine lathes made easy, and at lower cost.

Can be easily attached to all size lathes.

A reliable device that will aid the operator in the work of cutting threads.

Threads can be cut close up to shoulders as easily as the ordinary thread.



Eliminates stopping or reversing the lathe.

Saves cost of backing belt.

Saves power to drive same.

Fast growing in popularity.

A large corporation ordered nine at one time. Another five.

Sent on thirty days' trial.

Send for folder today.

**JAMES M. COLVEN, 20 Wolffe Street,
Yonkers, N. Y.**

FEDERAL

Gauges

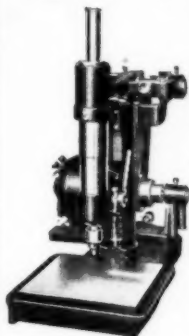
Dial Indicators

for Every Purpose
Accurate - Rigid - Lasting
Easily & Quickly Repaired

Federal Products Corporation
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Sigourney Sensitive Drills

*The Quality Tools
That Reduce Costs*



SIGOURNEY DRILLS are designed for those who realize that the best tools pay the largest returns on the investment.

Made with one to four spindles, plain or ball bearing, belt or motor drive. *All parts interchangeable.*

The illustration shows our motor-driven, all-ball-bearing No. 0 High Speed-Bench Drill which may be operated up to **10,000 R. P. M.**

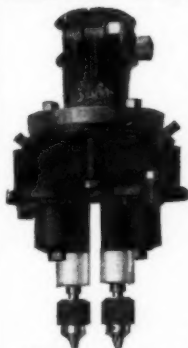
*Full data and prices
sent you on request.*

Sigourney Tool Co.

Hartford, Conn., U. S. A.

Buhr Multiple Driller

*Combines Accuracy
With Power*



Because its design incorporates the principles that make Buhr Patent Heads stand out, plus *full adaptability* — because the detachable adapter and driver transmits power *equal to the combined thrust of all the spindles*, and the arms and head are so ground that accuracy is insured, the New Buhr is setting a standard in multiple drilling and tapping efficiency.

*Write, and learn how its
new features reflect in
the quality of its work.*

Buhr Machine Tool Co.

All Spur Geared

Green and Davis Sts., Ann Arbor, Mich.

The Perfect Case Hardening Compound

No Smoke

No Fumes



Non-Poisonous

Non-Inflammable

Non-Explosive

The Purest, Most Rapid and Economical, Uniform and Effective, Case Hardening Compound on the Market for all Kinds of Iron and Steel.

Sold in 1-3-5-10-lb. Cans and 25-50-lb. Kegs.

Ask your dealer or write for Booklet "K" on hardening

KASENIT COMPANY, 122 Greenwich St.,
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"Borgeson Universal Joints"

Are you a user of Universal Joints?
If so!

Remember well and bear in mind that a good Universal Joint is hard to find. But if you want one tried and true, you will want the "Borgeson" before you are through.

You will become not only a "Buyer" but a "Booster" for "Borgeson."

SIZES: $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, 1, $1\frac{1}{8}$, $1\frac{1}{4}$,
 $1\frac{1}{2}$, $1\frac{3}{4}$, 2, $2\frac{1}{2}$, $2\frac{3}{4}$.

Should you require Special Universal Joints, be sure to write for quotation.

*Complete description gladly
furnished upon request*

The Borgeson Mfg. Co., Inc.
Torrington, Conn.

Patented
Jan. 30, 1917



New "AUTEX" Extension Reel

1926 Model

Don't Forget the Swivel Joint Feature

Permits of carrying the lamp
in any direction.

Type 6

Rapidly finding a place in large
Industrial Plants, Machine
Shops and Service Stations.

New equipped with Belden Rubber Cord
Approved by the Underwriters

Write for descriptive circular

The Cincinnati Specialty Mfg. Co., Inc.

1903 Powers St.,

Cincinnati, Ohio

R & G Adjustable Boring Tool

Invaluable in the Tool Room and on Production Work
on Turret Lathes, Horizontal Mills, Etc.



Graduated to
one thousandth
part of an inch.

It saves time and insures ac-
curacy in boring jig plates,
dies, etc., on milling ma-
chine table and drill press,
that cannot be handled on
the lathe. It readily trues to
size holes drilled on turret
lathe.

Only \$38

If standard taper shank is
required, the price is Five
Dollars extra.

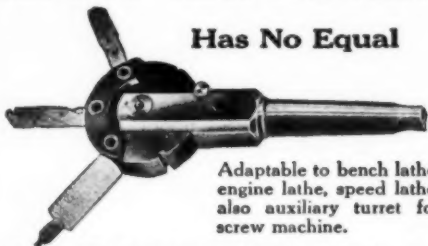
Send us your order or write
for complete description of
this handy, time-saving outfit.

Ribbe & Grey

La Porte, Ind.

The M-P Three Tool Turret

Has No Equal



Adaptable to bench lathe,
engine lathe, speed lathe,
also auxiliary turret for
screw machine.

Improved E-Z Set Boring Tool illustrated in last issue.

SEND FOR CIRCULAR

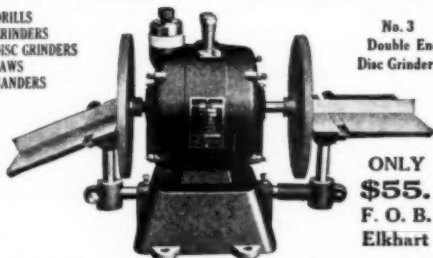
The Maxwell Products Co.

Ottawa & Indiana Ave.,

Cleveland, Ohio

Winterhoff ^{Motor Driven} Portable Tools

DRILLS
GRINDERS
DISC GRINDERS
SAWS
SANDERS



No. 3
Double End
Disc Grinder

ONLY
\$55.
F. O. B.
Elkhart

For processes that require grinding on a true flat surface, the Winterhoff No. 3 is the ideal tool. In its new design are incorporated many features that result in sound economies. *Let us tell you about them.*

Winterhoff Tool & Machine Co., 109 South Elkhart Ave.,
ELKHART, IND., U.S.A.

HARDINGE

COLLETS



We are Specialists —

in manufacturing any design collet—from the smallest to the largest sizes, either from sample or drawing, and including Screw Machine Collets.

Prices quoted on application

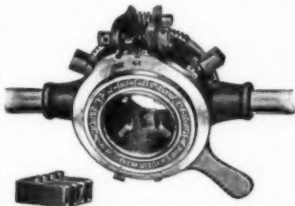
Hardinge Brothers Inc.

4149 Ravenswood Ave. Chicago Ill.

A Positive Quick-Acting Lock

For Adjustable Quickly-Opened Dies

Instead of Clamps, Levers, Screws or Nuts that must be strained or pounded to make them hold threading dies in position.



That is one great difference between the "DUPLEX" DIE STOCK for pipe and others of the same type; but there are several more points of difference and value.

Dies adjust for variations and open quickly for removal.

THE HART MFG. CO., 2319 E. 20th St., CLEVELAND, O.

If An Architect Put The Pantry in the Attic—



—what confusion would follow! Yet that is practically what you do when you put all your stock in a store room. Say you are using bar stock on a screw machine or lathe; does your operator leave his post every time he wants stock? Or do you pay a man to do it for him?

The Handiest Racks

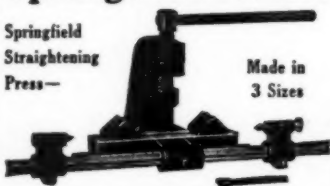
do away with these dead labor costs, beside conserving material and space. From its brackets the operator can get what he wants without moving, and feed as fast as the machine will take. Get one and watch your production grow.

Of course we ship on trial

Wm. S. Yohe Supply Co.
503 Mahoning Road, N. E., Canton, Ohio

Springfield Work Is

Springfield
Straightening
Press—



Made in
3 Sizes

Straight

Invaluable for
straightening
cam and crank
shafts, sprung
tools, etc.

Wherever straightening is needed, the Springfield gives satisfaction. Whether in shop, or tool room, or garage, it works with unequalled accuracy and speed. Screwed near the bench, the operator can straighten any length of rough or finished work, without leaving his post. *A Springfield quality product.*

Write for folder illustrating many of its uses

The Springfield Machine Tool Company
633 West Southern Avenue, SPRINGFIELD, OHIO
We also manufacture Engine Lathes and Shapers

"Keep Your Production on Wheels!"



This is the message of a foremost efficiency expert.

The CanTon Portable Crane

does this for you! It makes it possible for one man to lift pieces weighing up to 6000 pounds, and to move those pieces to the most inaccessible part of your shop.

A size for every use.

Write for booklet E-8

CANTON FOUNDRY & MACHINE CO., Canton, Ohio

New York Office: 203 East 15th Street, Second Floor

Towsley Trucks PAY 500%

**—Every Year On
Their Cost Price!**



Glad to tell
you how

TOWSLEY TRUCKS

repay their
cost every
two to three
months.

Every style
for every
need.

Write for facts and figures; you'll never regret it

**John T. Towsley Mfg. Co., Cincinnati,
Ohio, U. S. A.**

USE "D. & W." DEMAGNETIZERS!



With a unique construction, they are simple, dependable

A rigid continuous U shaped core, made of the highest grade laminated electrical steel, is energized by two

stationary coils, thru which alternating current is passed. Construction is similar for d. c. machine, only in addition it contains a small converter.



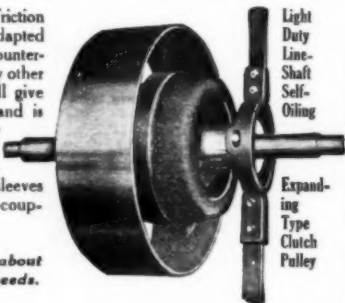
Have you any special problems in connection with the use of Magnetic Chucks? We will gladly investigate and report on same, or design a special chuck for your particular needs. *Write us today.*

J. & H. Electric Co., 161 Clifford St., Providence, R. I.

Edgemont Type B Friction Clutch

The Type B Friction Clutch is well adapted for line-shaft, counter-shaft and many other drives. It will give good service and is simple and easy to operate. Made in pulleys, extended sleeves and cut-off couplings.

Write us now about your clutch needs.



Light
Duty
Line-
Shaft
Self-
Oiling

Expand-
ing
Type
Clutch
Pulley

Edgemont Machine Co., Inc., DAYTON, OHIO

For Sure Balance--

an absolutely level and solid "Way" is necessary

Bowsher "Balancing Ways"



are brought to an absolute level in ten seconds. No revolving parts.

The edges or "knives" upon which the work is tested are ground true, and are mounted upon the planed "ways" of a heavy bed or frame.

Standards adjustable to suit length of arbor.

Three sizes for floor—one for bench use

Send for Catalog "F"

The N. P. Bowsher Co., South Bend, Ind.

Balancing to a "T"

The Anderson Ever Ready



Whether it's a crank shaft or a turbine rotor you are testing, the Anderson is equally sensitive. With its 5 styles it will balance anything that revolves.

It requires no leveling or adjustment, no centers; its hardened spindles are not dented by use—like the frame, they last indefinitely.

"Swing"	20"	40"	60"	72"	96"	72"
Greatest distance bet. standards	20"	30"	30"	66"	88"	20"
Capacity in lbs.	1000	2000	2000	5000	10000	24000
Approx. shipping weight	45	90	150	350	650	
Code	Ben	Bid	Bis	Bib	Ben	

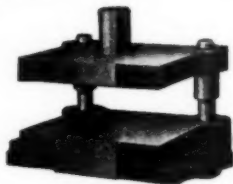
Any of above can be furnished with longer shafts

Anderson Bros. Mfg. Co.

1915 Kishwaukee St., Rockford, Ill.



*There are 12 types and
97 sizes of Danly Dies
Sets, ready assembled,
available for immediate
delivery.*



Just Ask Yourself Why It Is!

Why do you suppose that Chrysler, Cutler-Hammer, Eastman Kodak, Remington Typewriter, General Electric, Westinghouse, Stewart-Warner, Hupmobile, Briggs Mfg., Franklin, and almost 4000 others are using Danly Die Sets?

It is because they have found they can obtain die sets better and cheaper from Danly because of specialized production—die sets and die makers' supplies exclusively—manufactured upon a production basis.

The saving of 20 to 50% in first cost, alone, is good reason why you, too, should use Danly Die Sets. The convenience of being able to order by telephone or telegraph is another reason. Bigger still are the economies through use. May we explain these?

*Send for the new 34-page Catalogue,
fourth edition.*

Danly Machine Specialties, Inc.

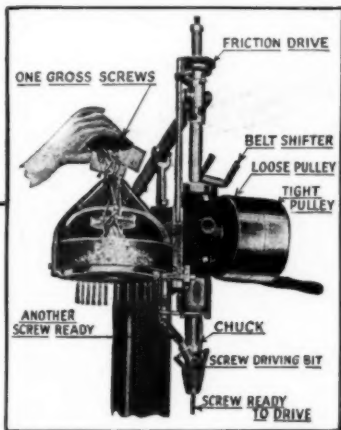
2116 S. 52nd Avenue, Chicago, Ill.

LONG ISLAND CITY, N. Y.
35 Wilbur Ave.

DETROIT, MICH.
1537 Temple Ave.

Lowest Cost Screw Driving

With MAGAZINE-FED Machines



THE MAGAZINE FEED of the Reynolds Automatic Screw Driving Machine is clearly shown above. Just dump a score or more of screws into the hopper, and the "Reynolds" automatically magazines and drives them.

"Saves us over \$2,000 a year"

is the word recently received from a user. Other users find that it easily saves them from 65 to 85 per cent.

And the work is better, too—screws are properly turned in—they hold better. It has enabled some users to reduce their screw sizes.

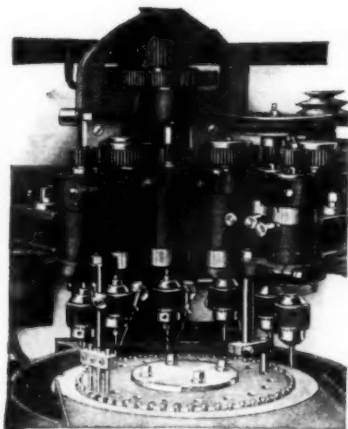
No matter what kind of screws you use, let us know their length and gauge, with dimensions over all of your work, and let's look into this together. It may put many an extra dollar in your pocket. And why not write today?

The Reynolds Machine Company

Dept. H. H.,

Massillon, Ohio

*Jacobs
Chuck*



Countersinking and tapping small hexagon nuts.

Anderson

THIS MACHINE has six spindles working simultaneously. The operator, and a

By this arrangement, obtained a production of one hour, three of the machine.

The work of J. materially increased the machine.

For

THE ANDERSON

This advertisement is in the interests of good Drilling by the makers of the Jacobs

Modern equipment is



erson No. 40 Dial Tapping Machine

HIS MODERN MACHINE is equipped with
spindles—three for drilling and three for tap-
ing. The work is placed in the dial by the oper-
ator, and automatically ejected when completed.

In this arrangement of dial and spindles there is
maintained a continuous production of 5,000 nuts an
hour, three nuts being completed with each stroke
the machine running at from 30 to 35 strokes per minute.

The use of JACOBS CHUCKS as standard equipment
materially increases the convenience and efficiency of this
machine.

For complete information, write to—

ANDERSON DIE MACHINE CO., Bridgeport, Conn.

*ent is published in the
Drilling Equipment
the Jacobs Chuck*

Equipment is a present necessity

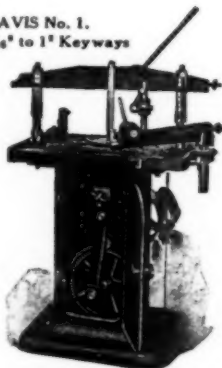


In Keyseating—

Speed is Best Combined
with Accuracy in the

“Davis”

DAVIS No. 1.
Cuts $\frac{1}{16}$ " to 1" Keyways



Built in two sizes

Whether your aim is quantity production of standard parts, or the versatility required in every day jobs, the DAVIS will best meet your requirements.

The simplicity of its construction reduces, to the smallest degree, the chance of its getting out of order. The speed with which it can be set up for different jobs, makes it a real cost reducer.

Write for our interesting tables of cutting time

Davis Keyseater Company

255½ Mill Street, Rochester, N. Y., U. S. A.



Whenever Efficiency
And Low Operating Costs
Are Spoken Of—

The Rarefied Dust Collector

is mentioned

¶ Because of the absolute efficiency with which it collects and automatically discharges all heavier-than-air dust—whether from emery wheels, sand blasts, tumbling mills, or polishers—it has impressed users.

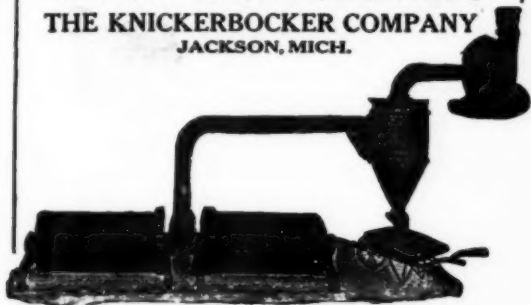
¶ Because the partial vacuum principle on which it works has done away with screens that become clogged, or movable parts that get out of order—owners have faith in it.

—Add the fact that internal friction is practically done away with—repair costs are held at zero, and in many instances a 40% saving in power is effected;

—is it any wonder that so many executives are enthusiastic over the Rarefied? That some large plants are equipped throughout with them, one company using up to 34?

Let us send you our interesting booklet explaining the Rarefied way

THE KNICKERBOCKER COMPANY
JACKSON, MICH.



**LET A POWELL BLOW GUN
AIR VALVE-**

Blow your Turnings or Borings away

BLO-GUN



**AN INTERCHANGEABLE
NOZZLE TIP FOR EVERY PURPOSE-**

The Wm. Powell Co.

2521-2531 Spring Grove Ave.

CINCINNATI,

OHIO



Write!

**TOLHURST Chip Wringers reclaim
6 to 15 gallons per load and handle
three or four loads an hour!**

Tolhurst Machine Works

Troy, New York

Thompson Universal Grinder

—Gives a performance that never varies in accuracy. No matter what diversity of grinding processes your shop requires, everyone of them may be completed on the Improved Thompson. Self-contained, motor driven, it is designed to give the most efficient and rapid production.

Capacity 10"x36"

*Illustrated folder
gives full details*

**The Thompson
Grinder Co.**
Springfield, Ohio



Grinds or Polishes

This job consists of grinding one side and squaring up another (2 ways) at one operation on the PORTER-CABLE Belt Grinder (smaller size). Better work in less time is the result.

*Ask us about its proven
economy on flat grinding*



**PORTER-CABLE
MACHINE CO
SYRACUSE, N.Y.**



Drilling Economy Into the Job

The U. S. Multiple Spindle Drill Heads transform your single spindle drill into a multiple—drilling two or more holes at the same time, utilizing the same feeds and speeds you would use for one.

A special adjustment enables you to drill in any pattern that you like. The U. S. cuts your equipment costs, increases your output and efficiency.

*Let us show you
how to economize*

The United States Drill Head Co., 1952 W. Sixth St., CINCINNATI, O.

Michigan Agents—National Sales Engineering Corp., Detroit, Mich.

The Steel Fingers— Of the Walton Tap Extractor



Grip lost moments that hamper production!

SNAP—the jagged edges of a tap cling stubbornly beneath the surface. Again you are faced with the old problem—a problem solved so ingeniously by the Walton Tap Extractor.

Its four fingers of crucible steel, mounted on a grooved handle, bite deeply into the flutes. A sharp twist at the outer end, and the tap is out instantly.

Try it 60 days, and you'll never send it back

The Walton Company

Hartford, Conn., U. S. A.

Whitney Ball Bearing **Punch No. 40**

Made of 45 50 point O. H. Steel, drop forged. Very rigid—no springing in operation. Now provided with movable handle, to meet user's needs.

Capacity $\frac{5}{8}$ thru $\frac{3}{4}$ " iron
Depth of throat, 3"
Height of throat, 2"
Weight complete, 87 lbs.

The elimination of friction insures more work at less cost in all Whitney Punches.

Write for Catalog and Price List



**Ball Bearing
Punches**

in
many
styles
and
sizes

Whitney Metal Tool Co.

95 Forbes Street,

Rockford, Ill.

A Real Bargain

BRAND NEW

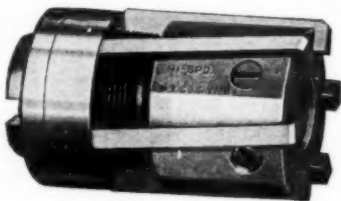
**6" x 30" Plain and
10" x 30" Universal**

GRINDERS

Barber - Colman Company

Rockford, Ill., U. S. A.

"X-L" Adjustable Inserted Spiral Blade Shell and Machine Reamer



Reamers made with Left Hand Angle Cutting Blades do not dig in, and all chatter is eliminated. This means free, clean cutting, smooth holes, and increased production.

The range of expansion is from .100" in the smaller sizes to .150" in the larger sizes. Made with High Speed Steel Blades.

This is a real production reamer. The left hand helical flutes cut fast and clean. Made only in high speed steel. Made with straight and tapered shanks. All sizes carried in stock.

Catalog on Request

The Schellenbach-Hunt Tool Co.

118 Opera Place, Cincinnati, Ohio

Agents: Gropler Bros., 105 Hudson St., New York, N. Y.
E. E. Fletcher, 6007 Euclid Ave., Cleveland, Ohio

Used and Rebuilt Machinery Section

Lists of Used and Rebuilt Machinery, either For Sale, Wanted or For Exchange, set in uniform style, will be published in this Section at the rate of 50 cents a line, across the page, each issue, plus \$2.50 for name and address. Minimum charge, \$5.00. No display permitted.

Write directly to those offering the machines for sale for prices and full descriptions. If what you seek is not listed, use the blank enclosed to make known your wants to the publisher, who will pass them along to all Machine Tool Blue Book advertisers.

Monthly Circulation of Machine Tool Blue Book, 25,000.

FOR SALE BY

W. L. Steege Co., • 25-27 So. Clinton St., Chicago
MOTOR

15 H. P. Westinghouse slip ring motor, complete, used only 3 months, \$225.
LEATHER BELTING
3,500 Lbs. of leather belting, in good condition, at 35 cents per lb.

FOR SALE BY

Belvidere Screw & Machine Co., • Belvidere, Ill.
SPECIAL GAS OVEN.

A special 3-door, tray type, Indirect Gas Heated Oven, fully equipped with a Honeywell thermostat, with 38 trays suitable for holding spark plugs or other small parts; practically new; has had little use since installation in our plant; will make a very attractive price for quick turnover.

FOR SALE BY

Wayne Machinery Company. • • Fort Wayne, Indiana

Wayne Better Values	
Air compressor, 500 cu. ft. Bury.	Millers, slab, Ingersoll 36"x20" 16'.
Baler, hydraulic, No. 23-G Logemann	Sheet metal, brakes, shears, etc.
Millers, keyseat, Nos. 1 & 2 Newton.	
Large selection. Tell us your needs.	

FOR SALE BY

Machineshop Equipment Corporation. • **South Boston, Mass.**

Boring machine, Niles horizontal, bar 4½", table 33x60, motor drive.

Boring machine, Lucas No. 21 horizontal, 2 $\frac{1}{2}$ " bar.

Miller, No. 3 Becker vertical, motor drive, constant speed.

Shaper, Pratt & Whitney vertical.

Splitting shear, Ryerson, 8' reach, heavy.

All in A-1 condition and priced very low.

FOR SALE BY

The Akron Equipment Company. • • **Akron, Ohio**

Automatic, 4-spindle, 1½ capacity Acme, serial 9201.....\$ 475.

Engine lathe, Fitchburg, 13"x6', not screw cutting, chuck.....	55
--	----

Engine lathe, Blaisdell, 14"x6', c. s., c. r., taper att., chuck.....	95.
---	-----

Engine lathe, Fish, 39"x23", raising blocks to 46", c. s., c. r., and extra

rest at rear, chuck jaws..... 1050.

Milling machine, Becker plain, Lincoln type, No. 7-H.....	125.
Surface grinder, 8" x 22" National Acme automatic.....	60.

Surface grinder, 6" x 22" National Acme automatic	60.
Threading machine, 2 spindle, 1" capacity National Acme	125.

Threading machine, 2-spindle, 1" capacity, National Acme..... 128.

USED AND REBUILT MACHINERY

FOR SALE BY

Chas. Molitor Machinery Co., 118-124 S. Clinton St., Chicago, Ill.

LATHES.

- | | |
|--|---|
| 28"x14' Schumacher-Boye, q. c. g. | 16"x8' Hendey, taper, reliev. attach. |
| 24"x12' American, q. c. g., ind. turret. | 16"x8' Seneca Falls, q. c. g., (2). |
| 24"x10' Lodge & Shipley, grd. hd. | 16"x 8' Pratt & Whitney, q. c. g., |
| 21"x10' LeBlond, q. c. g., t. a. | taper, relieving attachment. |
| 20"x12' Hendey, taper attachment. | 16"x 8' Cincinnati q. c. g. |
| 18"x 9' Hamilton, q. c. g., taper, draw. | 15"x 6' Carroll-Jamieson. |
| 18"x 8' Boye & Emmes, q. c. g., | 14"x6' Bradford, q. c. g., draw, collets. |
| taper, draw, collet attachment. | 14"x8' Hendey, geared head. |
| 18"x 9' Chard, q. c. g., taper, draw. | 14"x8' LeBlond, quick change gear. |
| 18"x 8' LeBlond, q. c. g., ta., draw. (2). | 14"x6' Rockford, dbl. b. g., taper. |
| 18"x 8' Sidney, quick change grs. | 14"x8' Willard. |
| 18"x 8' Morris, q. c. g., dbl. g., (2). | 14"x 6' Hendey, draw att. |
| 18"x8' Bradford, q. c. g., draw, collets. | 10"x 5' Monarch, q. c. g. |
| 17"x8' LeBlond, q. c. g., taper, relieving attachment. | 10"x 5' South Bend, motor attach. |
| 16"x8' Hendey, q. c. g., taper. | 4" & 1" Hardinge precision (2). |

MILLERS.

- | | |
|--|--------------------------------------|
| 24" Bullard vert. rapid production. | 24" Bullard vertical turret. |
| Nos. 1 & 2 Brown & Sharpe univ. | 24" Colburn vertical. |
| Nos. 1 & 2 Kempsmith universal. | No. 25 Becker plain, (4). |
| No. 2 Rockford plain, b. g. | No. 3 Kempsmith, gr. box fd., plain. |
| No. 2 Cincinnati plain. | Gooley & Edlund, production. |
| Nos. 3, 5B Becker vertical. | No. 6 Transit, production. |
| No. 4 Ohio rapid production. | 24" Twin spline miller, P. & W. |
| No. 13 Garvin, b. g., power feed, (6). | U. S. and Whiton hand millers, (3). |

SHAPERS.

- | | |
|---|----------------------------------|
| 24" Stockbridge, sgl. pul. drive, b. g. | 16" Potter & Johnston tool room. |
| 24" Rockford, b. g. | 14" Rockford, back geared. |
| 24" Hamilton, b. g. | 16" Smith & Mills, b. g. |
| 21" Smith-Mills, sgl. pul. drive, b. g. | |

DRILL PRESSES.

- | | |
|---|--------------------------------------|
| 24" Baker Bros. heavy duty, (3). | 6-spindle Sipp, 1/2" capacity. |
| Sipp, with comp. tilting table, (2). | Almond 3', slid. hd., hi-spd., post. |
| 2-spindle Henry & Wright, 1" cap. | 14" & 1/2" Gridley 4-spindle, (7). |
| 1, 2, 3 & 4 spindle Avey, No. 2 hi. sp. | Large variety 14", 16", 20" & 24". |
| 3-spindle Leland G., 1/2" cap., bench. | 5' Bickford radial. |

GRINDERS.

- | | |
|--|---------------------------------------|
| Bryant internal and chucking, (6). | 30" and 40" Besly and Gardner, disc. |
| Cincinnati universal, 4"x57" table. | No. 65 Heald cylinder. |
| No. 1 Greenfield universal. | No. 120 Gardner, ball bearing. |
| No. 2 Oakley universal. | No. 6 Gardner, chuck & disc, 20"x12" |
| No. 2 LaSalle surface, magn. chuck. | table, long, and cross feed. |
| No. 2 Brown & Sharpe surface. | Cincinnati No. 1 universal. |
| No. 1 & No. 2 Norton universal. | 6"x18" Landis cylindrical, self-cont. |
| 16"x30" Norton cylindrical. | No. 14 Landis 10"x30 cylindrical. |
| 12"x72" Brown & Sharpe cylindrical. | No. 1 LeBlond universal. |
| No. 4 Gardner ball bear., 24" disc, (5). | No. 3 Wilmarth & M., mag. chuck. |

SCREW MACHINES AND TURRET LATHES.

- | | |
|--------------------------------------|---|
| Jones & Lamson, single spindle. | No. 4 Warner & Swasey univ. |
| 1/2" Gridley 4-spdl. auto., (3). | No. 6 Warner & Swasey, b. g., fr. hd. |
| 1 1/2" Gridley 4-spdl. auto., (4). | No. 6 Foster, power long. & cross. |
| No. 60, No. 0, No. 2 B. & S. auto. | 1" & 1 1/2" cap. Acme, b. g., frict. h. |
| No. 60, No. 0, No. 2 B. & S. former. | 14" Gisholt, motor drive. |
| Nos. 00, 1, & 4 B. & S. semi-auto. | Nos. 0, 1, 2, 3 Foster and B. & O. |
| Nos. 2 & 4 Warner & S. pl. & g. | 16"-18" Fox turret lathes, fric. hd. |

PUNCH PRESSES AND SHEARS.

- | | |
|------------------------------------|--------------------------------------|
| No. 33P Toledo. | Emco bench type, (10). |
| No. 31 Toledo, 6 1/2" stroke. | No. 4 Bliss-Stiles, geared notching. |
| No. 71 Toledo double crank. | No. 5 Bliss-Stiles, geared. |
| No. 45 Toledo horning, b. g. | 1/2" capacity slitting shear. |
| No. 3 Rockford, inclined flywheel. | |

USED AND REBUILT MACHINERY

Chas. Molitor Machinery Co.—Continued.

MISCELLANEOUS.

Bolt cutter, 1" Landis.
Bolt cutter, 4" Geometric.
Broaching machine, No. 1 LaPointe.
Broaching mch., No. 3 LaPointe 2sp.
Centering mchs., single and double.
Gear cutter, No. 13 B & S., bevel & s.

Gear cutters, Waltham auto., (4).
Keyseaters, Nos. 1 & 2 Davis.
Pipe cutter, 3" Hoe & Son.
Reducing rolls, 11"x22", dbl. gears,
Toledo and 6"x30" Bliss.
Steel corrugating rolls, 7"x26".

FOR SALE BY

Nelson Machinery Co.,

123-131 N. Pearl St., Green Bay, Wis.

Air compressor, 212 cu. ft., Chicago
pneumatic crude oil engine driven,
mounted on wheels.
Bending rolls, 5', 4" capacity.
Boilers, 200 h. p. Scotch Marine, (2).
Bolt cutter, 2" cap. Schlinker.
Buffing stand, No. 4 Gardner, b.b.
Drill press, 22" American, p. f., back
geared.
Lathe, 36"x18" Niles-Bement-Pond.
Milling mche., No. 2 Garvin univ.
Planer, 30"x30"x14' Betts, single hd.

Press, No. 4 Rudolphi & K., o. b. i.
Punch press, No. 1 Toledo, o. b. i.,
geared.
Punch & shear, No. 3 Royersford,
double end.
Punch & shear, Rock River, single
end, 18" throat.
Punch press, No. 29 Swaine, fly-
wheel, o. b. i.
Squaring shr., 30" Kutscheid No. 2.
Wall radial drill, 3 1/2' Canedy-Otto
No. 50.

FOR SALE BY

The O'Brien Machinery Co.,

113 N. Third St., Philadelphia, Pa.

Automatic, No. 6A, model 2 Potter
& Johnston, (2).
Die sinker, No. 2 Pratt & Whitney.
Die sinker, No. 3 Pratt & Whitney.
Die sinker, No. 4 Pratt & Whitney.
Drill, 32" Aurora, motor driven, tap-
ping attachment.
Drill, 4" American, motor drive.
Drill, 26" Barnes sliding head, gear
box drive.
Drill, 22" Aurora sliding hd., belt dr.
Gear cutter, 12" Gould & E.
Grinders, foundry, Norton heavy
duty, (2).
Grinder, No. 2 Cinti univ. 12x36.
Hammer, 4000 lbs. Chambersburg
steam drop.
Hammer, 2500 lbs. Chambersburg
steam drop.
Hammer, 2000 lbs. Chambersburg,
double frame, steam.
Hammer, 1000 lbs. Chambersburg
steam drop.
Hammer, 600 lbs. Cham'burg st. d.
Hammer, 1500 lbs. Erie sgl. frame st.
Hammer, 1000 lbs. Niles-Bement-
Pond, double frame.
Hammer, Bement-Miles, 300 lbs.
Lathe, 30"x30" Pond.
Lathe, 27"x10' LeBlond, with turret
attachment.
Lathe, 30"x30" Harrington.
Lathe, 16"x8' Cisco, h. s., q. c. g.,
taper.
Lathe, 18"x8' Hamilton, h. s., q. c. g.,
taper, (2).

Lathe, 24"x10' American, taper att.
Milling machine, Newton combina-
tion circular milling machine
and saw for structural work.
Milling mche., No. 3 Garvin duplex.
Milling mche., No. 5-H Becker vert.
Pipe machines, 2", 4", 6", 8" & 12"
Oster, Cox, Williams, Eaton-Cole
& Burnham and Jarecki makes,
belt or motor driven, comp. stock.
Planer, 36"x36"x24', Bement, 4 hds.
Press, No. 734 Bliss trimming press,
with side shear.
Presses, Nos. 2, 3, 4 Federal, new.
Presses, Nos. 18, 19 and 20 Bliss.
Press, Chambersburg motor driven
trimming.
Punch and shear, No. 3 Hilles & J.,
dbl. end, motor dr.; punch end,
42" thrt., cap. 1 1/2" thru 1"; shearing
end, 36" thrt., cap. 1" plate, 2 1/2"
round, 7"x1 1/2" flat, 5"x5"x8" angle.
Punch and shear, Pels combination;
punching cap. 1" thick; shearing,
2" rd., 2 1/2" squares, 6x6x1" angles.
Punch and shear, 12" throat Clevel-
and, type E.F.
Radial drill, 5' Pond, motor driven.
Saw, Newton No. 2 cold saw.
Saw, Espen Lucas No. 10 cold saw.
Shaper, 24" American.
Shapers, 12", 14", 16", 21" and 24"
stroke, assorted makes.
Shaper, 3 Bement-Miles massive
heavy duty, traveling head.

USED AND REBUILT MACHINERY

FOR SALE BY

E. L. Klauber Machinery Co.,

Bolt cutter, Little Giant, 1" cap.
Bolt cutter, National, 1" cap.
Drill, Kokomo hi-speed, 1-spindle.
Drill, Sibley 20", b. g.
Drill, Barnes 24", b. g., s. h.
Drill, Barnes 34", b. g., tapp. att.
Drill, 42" sens. wall radial.
Grinder, B. & S. No. 11 plain.
Grinder, B. & S. No. 3 cutter.
Grinder, Ransom disc, 12" wheels.
Hydraulic press, 7½ ton.
Lathe, Barnes 12x5.

320 South Third St., St. Louis, Mo.

Lathe, 16"x5' Hendey, q. c. g., t. a.
Lathe, 14"x6' Prentice.
Lathe, 16"x8' Monarch, q. c. g., d. b. g.
Lathe, 16"x8' Lodge-S., q. c. g., d. b. g.
Lathe, 16"x8' South Bend, plain chge.
Lathe, 21"x8' LeBlond, q. c. g., d. b. g.
Lathe, 26x10 hvy. duty, q. c. g., d. b. g.
Millers, No. 0 Burke; No. 23 Fox.
Planer, American 30"x30"x8'.
Punch press, No. 2 Rockford.
Screw machines, 1" & 1½" cap.
Turret lathe, Warner & S. No. 2.

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Fantus Factory Locating Service,

1325 S. Oakley, Chicago

METAL-WORKING PLANTS.

25,000 sq. ft. 1-story brick, fully equipped; sacrifice; terms.
42,000 sq. ft. 1-story brick, fully equipped; will lease.
75,000 sq. ft. Foundry, equipped, valuable service rights.

FACTORY BUILDINGS.

15,000 sq. ft. Indiana; \$3000 down.
31,000 sq. ft. near Chicago; \$25,000; terms.
30,000 sq. ft. on Miss. River; 4 acres; bargain.
42,000 sq. ft. Chicago; part rented; terms.
80,000 sq. ft. Indiana; 1 story, like new; sacrifice.

Free industrial sites! Buildings financed.

Write us your requirements.

FOR SALE BY

Clinton Machinery Co.,

128 So. Clinton St., Chicago, Ill.

MILLING MACHINES.

No. 3H LeBlond univ., fully equipt.
No. 20 Van Norman duplex.
No. 34 Ohio plain.
No. 2½ LeBlond plain.

No. 1Y Brown & Sharpe plain, (2).
No. 25 Becker plain.
No. 3½ Fox, p. f.
No. 0 Bristol hand miller, b. b.

LATHES.

18"x 8' Giddings & L., s. q. c., comp.
16"x10' Van Wyck, complete.
16"x 8' Prentice, q. c. g., complete.
16"x 6' Canedy-Otto, s. q. c.
14"x 7' Sound Bend, complete.

14"x 6' Rockford, s. q. c., d. b. g.
14"x 6' Hendey, q. c. g., taper attach.
10"x 5' Seneca Falls, draw-in, collets.
9"x 4' Seneca Falls, draw-in, collets.
9"x 3' Stark bench with collets.

DRILLS AND PUNCH PRESSES.

4-sp. Barnes gang drills, (2).
3-sp. Barnes.
4-sp. Taylor-Fenn, chain drive.
No. 12 Pratt & Whitney, 12 spindle.
24" Rockford, b. g., p. f., w. & l. fd.
Henry & Wright, b. b., h. s., (2).

20" Rockford, b. g., p. f., w & fd., (3).
20" New Excelsior, b. g., p. f., w. l. fd. (2)
No. 2½ V. & O., o. b. l.
No. 3 Swaine, o. b. i.
No. 4 American Can, o. b. i.
6 sp. Avey, h. s., b. b., No. 2 taper.

SHAPERS

16" Rockford, b. g.
17" Averbeck, b. g.
20" Gould & Eberhardt, b. g.

7" Rhodes.
21" Smith & Mills, b. g.
24" Cincinnati, b. g.

SCREW MACHINES.

¾" Gridley "model F," motor driven,
fully equipt, collets and tools, (4).

No. 1 Foster, wire feed and collets.
No. 1 Warner & Swasey, wire feed.

MISCELLANEOUS.

Arbor press, No. 5 Greenard.
Bolt cutters, 1 & 2-spindle, 1" cap.
Hammer, 4A High Speed.

Keyseaters, Nos. 1 & 2 Davis.
Oil separators.
36" square shear, foot power.

USED AND REBUILT MACHINERY

FOR SALE BY

Herman L. Winterer,

**943-53 N. Front St., Philadelphia, Pa.
LATHES.**

43"x17' 4 1/2" Bement-Miles.
37 1/2"x14' Johnson d. b. g., q. c. f., t. a.
32"x12' Pittsburgh, heavy duty, q. c. g.
32"x15' American, cone type.
27"x12' Bullard.
26"x11' Wickes, q. c. g.
26"x10' 6" Walcott, q. c., d. b. g.
28"x10' Niles, q. c. g.
24"x14' Porter.
21 1/2"x8' LeBlond.
20"x8' 6" Walcott, d. b. g., c. g., (2).
19"x10' Draper, patent head.

19"x8' Davis, q. c., d. b. g.
18"x7' Chard, d. b. g., semi q. c. g.
18"x6' to 8' lathes, (6).
16"x10' Whitcomb-B., semi q. c.
16"x6' American, q. c., pan bed, t. a.
16"x10' 6" Cisco, q. c.
15"x8' Sidney, q. c., d. b. g., t. a (2).
14"x6' Springfield, latest type, tool room type, t. a.
13"x6' LeBlond, geared hd., latest type.

TURRET LATHES.

34"x28" Pond, triangle.
3x36" Pratt & Whitney, hollow hex.
20x7' Bridgeport, 2 1/2", h. s.

19"x7' Fay & Scott, back grd.
No. 22 1/2 Garvin Monitor.
14"x6' Warner & Swasey.

DRILL PRESSES.

42" Gang radial, s. p. speed box.
40" Barnes horizontal radials. (2).
26" Rockford, tapping attachment.
26" Aurora, sliding head.
25" Snyder, tapping attachment.

34" Barnes, s. h., geared feed, comp. table.
24" Sibley & Ware, sliding head.
24" Baker, heavy duty.
21" Aurora, b. g., p. f.

MILLING MACHINES.

No. 5 Cincinnati, table 9 1/2x50 1/2".
No. 5 Brown & Sharpe vertical.
No. 3-B B. & S. plain, sgl. pulley.
No. 3 Hendey, q. c. g.

No. 3 Becker-Brainard, new model, q. c. g., vertical attachment.
No. 5-C Becker vert., rotary table.
No. 1 Milwaukee plain.

PLANERS AND SHAPERS.

48"x37"x9' Sellers, 2 heads.
48"x48"x12' Gray, 2 heads.
42"x36"x12' Cincinnati, 4 heads.
42"x36"x14' Cincinnati, 4 heads.
28" Woodward & P., crk., gear box.

48" Morton draw-cut shaper.
16" Potter & Johnston crank shaper.
15" Lodge & Davis shaper.
15" Potter & Johnston shaper.
14" Warren shaper.

BORING MILLS.

24" Bullard, rapid production.
36" Bullard, New Era type.
Boring mill, car wheel, 60" Newton.
Boring, drilling and milling machine, 17 1/2" Bement Miles horiz.
42" Bullard, 2 swivel heads, (2).

Boring mill, No. 1 Sellers horizontal, 24" bar.
Boring mill, No. 3 Binsse horizontal, 2 1/2" bar.
48" Bullard, 2 swivel heads.

PIPE AND BOLT MACHINES.

1 1/2" National, bolt, m. d.
4" Cox, pipe.
4" Williams, pipe, (2).

4" & 8" Eaton, Cole & B., pipe.
6" Oster pipe, motor drive.

MISCELLANEOUS.

Centering mche., 4" Whiton, dbl. sp.
Centering mche., 5" Whiton, dbl. sp.
Cold saw, No. 6 Nutter & Barnes.
Elec. hoist, 1-ton Link Belt, 2 ph. a. c.
Grinder, 13 1/2"x5' Landis universal.
Grinder, disc, No. 17 Besly.
Grinder, No. 1 LeBlond tool & cut.
Grinder, No. 1 Cinti tool & cutter.
Grinder, disc, No. 6 Gardner 26".
Grinders, several dbl. end electric.
Hammer, 15 lb. Bradley, helve.
Hammer, 25 lb. Bradley helve.
Hammer, 40 lb. Bradley, helve.
Hammer, 60 lb. Hotchkiss.
Hammers, 60 lb. Bellefonte upright; 2.
Keyseater, Morton 18" stroke.

Keyseater, No. 4 Catlin, m. d.
Punch presses, all sizes, (55).
Punch, No. 2 H. & J., 15" th., arch. jaw, 1 1/2" in 1".
Punch, horiz., L. V., grd., cap. 1".
Punch & shear, No. 2 H. & J., dbl. end, 20" th. cap., 1 1/2" in 1".
Riveter, air, 6" gap Allen, cap. 1 1/2".
Shr., No. 230 Niagara pwr. sq. m. d.
Shear, 30" Niagara, foot power.
Slotter, 14" Niles.
Slotter, 3 1/2" Rhodes vertical.
Straightening blocks, cast iron, (28).
5"x5' (297), 1 1/2" square holes.
Tooth rounding mche., Schuchardt & Schutte.

Large assortment of General Machinery. Send for complete Price List.

USED AND REBUILT MACHINERY

FOR SALE BY

W. P. Little Co.,

West 9th & Front Sts., Cleveland, Ohio

GRINDERS.

8" Heald rotary surface.

No. 1 B. & S. universal.

No. 3 Modern universal.

6"x18" Landis plain self-contained.

No. 75 Heald internal.

No. 6 Bryant chucking.

No. 10 Besly disc.

No. 24 Gardner vertical disc.

DRILLS, HEAVY DUTY.

No. 25 Foote-Burt, single pulley.

Baker type F (3).

LATHES.

14"x6" American, q. c. g. and t. a.

16"x6" Bradford, q. c. g. and t. a.

MILLING MACHINES.

No. 5 Becker vertical.

No. 13 Garvin.

No. 10 Kempamith hand.

No. 0 Cincinnati plain.

PUNCH PRESSES.

Beaudry, 50 lb. (2).

Bradley 50 lb. upright compact.

PUNCH PRESSES.

E. G. 22 Ferracute, geared.

S. G. 55 Ferracute geared.

No. 54 Cleveland straight side.

No. 3 Cady, Stiles pattern.

TURRET LATHES.

2"x24" Jones & Lamson.

2"x24" Cincinnati Acme.

HYDRO-PNEUMATIC PRESS.

Metalwood hydro-pneumatic press, type B-33, 15-ton capacity.

MISCELLANEOUS.

Broach, 3-A LaPointe of Hudson.

Cold saw, 20" Burke.

Radial, 4" Bickford, semi-universal.

Radial, 3" Bickford, cone type.

Slotters, 8" & 10" rotary tables.

Spline miller, 2" Pratt & Whitney.

Tappers, Rickert & S., vert. & hor.

Wiring machine, No. 1 Magee.

Partial list; send us your inquiries; 150 other tools in stock.

FOR SALE BY

Reliance Machinery Sales Company

1405 Brighton Road,

N. S. Pittsburgh, Pa.

Automatic, No. 53 Cleveland.

Blower, No. 5 Champion, 64" outlet.

Blower, Amer. pressure, 461 cu. ft.

Boring mill, No. 44 D. & H., floor, type, 34" bar.

Boring mill, Niles horiz., 44" bar.

Boring mill, 34" Colburn, 1 head.

Centering mch., 4" Whiton, s. h. 2-sp.

Drill, Baush 8-spindle, No. 3 taper.

Drill, 24" Hofer, sliding head.

Drill, 36" Snyder, sliding head.

Drill, Model "F" Turner auto. tur.

Gear cutter, 36"x10" G. & E., s. p. d.

Grinder, Oliver drill, 1" cap., m. d.

Grinder, WPL New Yankee, cap. 24".

Grinder, 12"x30" Modern plain.

Hammer, 80 lb. Bradley cush. helve.

Lathe, 12"x 6" Seneca Falls.

Lathe, 12"x10" Davis tool rm. q. c. g.

Lathe, 14"x 6" Hendey, g. h., m. d.

Lathe, 14"x 6" Seneca Falls, q. c. g.

Lathe, 16"x 8" Hamilton, q. c. g.

Lathe, 17"x8" Sidney, hvy. duty, q. c. g.

Lathe, 18"x8" L. & S., q. c. g., m. d.

Lathe, 18x10 Whitcomb-B. g. h. a. p. d.

Lathe, 24"x10" Reeves turret.

Lathe, 30"x12" Johnson, triple grd.

Lathe, 34"x12" LeBlond, triple grd.

Miller, No. 1 Knight drilling.

Miller, No. 14 American plain.

Miller, No. 2 Cincinnati, plain, v. a.

Miller, No. 14 Am. univ., new.

Miller, No. 2 Brown & S., universal.

Miller, model "C" Becker, vert.

Millers, Sellers, Lincoln type, (2).

Miller, model "H" Becker, mfg. type.

Pipe machine, B. & K., 1/4" to 2" m. d.

Pipe machine, 8" Cox, cap. 2 1/4" to 8".

Pipe machine, Merrill, 2 1/2" to 12".

Press, 15-ton Lucas forcing.

Press, 30-ton Lucas forcing.

Press, No. 62 Bliss, o. b., f. w.

Press, Ferracute DD2, o. b. i., cam.

Press, No. 10 Bliss reducing, 4" str.

Press, No. 54 Toledo trimming.

Punch, Royersford d. e., cap. 1" x 1/4", arch. jaw, 18" throat.

Punch, Wickes, 48" thrt., cap. 1 1/2" x 1".

Radial drills, 4" & 5" Prentice plain.

Radial drill, 5" American plain, t. a., motor drive.

Radial drill, 6" American pl., belt dr.

Reduction gear, Foote, 50 to 1.

Saw, American metal swing, m. d.

Shaper, 20" Steptoe b. g. crank.

Shaper, 24" Cincinnati b. g. crank.

Our warehouse is full of bargains. What have you for sale?

USED AND REBUILT MACHINERY

FOR SALE BY

The Strong, Carlisle & Hammond Co., Cleveland, O., Detroit, Mich.

ENGINE LATHES.

14"x 6' LeBlond, l. c. g. and chuck.
14"x 6' Hamilton.
14"x 6' Bradford, c. r., q. c. g.
14"x 6' Porter, compound rest and taper attachment, l. c. g.
16"x 6' South Bend, compound rest, complete.
16"x 8' Hendey Old Style, c. r. and t. a., q. c. g.
16"x 8' Bradford, c. r., loose change gear.

16"x 8' Monarch, compound rest, standard pattern.
16"x 8' Lodge & Shipley, old style, compound rest, q. c. g.
18"x 8' Prentice, compound rest, l. c. g., chuck.
18"x 10' Star, 4-s. c., s. g., with 16" 4-jaw ind. chuck.
24"x 12' Lodge & Shipley, patent hd., compound rest, q. c. g., arranged for constant speed motor drive.

TURRET LATHES AND SCREW MACHINES.

No. 4 W. & S. g. f. h. universal turret screw machine.
26" Gisholt heavy duty turret lathe.
2"x 24' Jones & L. g. h. flat turret.
No. 00 Brown & Sharpe auto., (2).
No. 0 Brown & Sharpe auto., (2).
No. 4 Warner & Swasey, p. h., a. c. and b. f.
No. 2 Warner & Swasey, p. h., a. c. and b. f.
No. 4 Warner & S., g. f. h., a. c. and b. f.

No. 3 Foster g. f. h. turret screw mch., with p. f. carriage and turret.
No. 55 Nat'l Acme 4-spd. auto., (3).
24" Cleveland model "A" auto. screw mch., with 5-hole turret.
14" Cleveland model "A" auto. screw mch., with 5-hole turret.
18" Libby, factory rebuilt.
No. 2-G Brown & Sharpe auto-matics (2).
No. 2 Brown & Sharpe turret forming (2).

DRILLING MACHINES.

2' Arm Gang plain radial with tapping attachment.
24" W. F. & J. Barnes, sliding head, back geared and power feed.
26" Aurora, sliding head, back geared and power feed.
2' arm Fosdick & Holloway plain radial, with t. a.

7" No. 1 Allen single spindle ball bearing, (2).
14" 4-spindle Leland & Co. h. s., b. b.
14" 3-spindle Henry & Wright, h. s., b. b.
14" 4-spindle Henry & Wright, h. s., b. b.

MILLING MACHINES.

No. 0 Bickett, hand, bench type (3).
Toledo hand milling machines.
No. 1-B K. & T. "Milwaukee" plain, constant speed drive.
No. 1 Brown & Sharpe vertical.
No. 4 Brown & S., cone drive univ.

No. 3 Brown & Sharpe vertical, taper nose spindle.
No. 22 Garvin vertical, with circular milling attachment.
No. 1-Y Brown & Sharpe plain.

GRINDERS.

No. 1 Brown & Sharpe universal.
No. 3 Brown & Sharpe universal.
No. 2 Brown & Sharpe surface, (2).
No. 10 Brown & Sharpe plain.
No. 6-A Bryant internal.

No. 1 LeBlond cutter grinder.
Type "DE" Hisey-Wolf internal.
No. 11 Brown & Sharpe pl. grinders.
Plain emery wh'l stand with column.

SHAPERS AND PLANERS.

20" Hendey friction, (3).
20" Smith & Mills crank.

22"x 22" x 5' Putnam planers (2).
38"x 38" x 14' Pond, 2 heads.

METAL CUTTING TOOLS AND SQUARING SHEARS.

Higley cold saw.

No. 6 Cockrane-Bly.

GEAR CUTTERS AND HOBBERS.

26" No. 3 Brown & Sharpe auto.
No. 12 Brown & Sharpe, bevel.

No. 18 Gould & Eberhardt vertical, for spur & spiral.

CENTERING MACHINES.

Centering machines, single spindle Cadillac, (2).

USED AND REBUILT MACHINERY

FOR SALE BY

J. P. Rentschler & Co.,

6722 N. Maplewood Ave., Chicago

Press, No. 30 Bliss arch, 3" stroke, fw.
Press, No. 14 Bliss, toggle drawing.
Presses, Nos. 18, 18-C, 19 & 20 Bliss,
o. b. i.
Press, No. 35 Swaine, o. b. i.
Press, No. 3 R. & K. o. b. i., 4" str.
Press, No. 1-P R. & K., o. b. i.

Press, No. 51 Toledo arch, 6" str., grd.
Presses, Nos. 164 & 165 Toledo tog.
Press, No. 165 Consol. dbl. crank.
Seamer, No. 12 McDonald auto.
Square shear, No. 30 Niagara, power.
Thread roller, No. 123 Bliss.

Can machinery, seamers, slitters, etc. Send inquiries.

FOR SALE BY

The Reeve-Fritts Co., 558-560 W. Washington Blvd., Chicago, Ill.

Drill, 4-spindle Barr.
Drill, 2-spindle Dwight Slate.
Drill, 19" Champion post, belt drive.
Engraving machine, No. 1 Gorton.
Gear shaper, 5"x36" Fellows.
Lathe, 9"x12" Sundstrand prod.
Lathe, 9"x20" Porter-Cable prod.
Lathe, 14"x8" Hendey, q. c. g.
Lathe, 16"x8" Flather, q. c. g.
Miller, No. 1 Bickett, vertical.

Pipe mch., 2" Chicago, motor dr.
Pipe machine, 6" Merrell.
Pipe mach., 12" Forbes.
Polishing machine, type F prod.
Polishing machine, type A prod.
Press, No. 3-A R. & K., o. b. i.
Press, No. 3 R. & K., o. b. i.
Press, P. G. 5 Ferracute.
Screw machine, No. 9 Foster.
Screw mche., No. 3 Foster, pr. fd.

FOR SALE BY

Jones Machine Tool Co.,

Front & Pike Sts., Cincinnati, O.

LATHES.

16"x 6' LeBlond, q. c. g.
16"x 8' Hendey, q. c. g. & t. a.
18"x10' Reed Prentice, grd. head.
20"x10' Lodge & Shipley, q. c. g.
24"x12' Bradford, quick change.
20"x 8' American, q. c. g.

26"x12' Reed, l. c., t. a.
30"x12' Houston Stam., q. c. g.
30"x16' Lodge & Shipley, q. c.
30"x16' Lodge & Davis.
36"x20' American, grd. hd., mtr. dr.
46"x20' New Haven, triple geared.

MILLING MACHINES.

No. 25 Becker.
No. 3 Cincinnati plain.
No. 4 Cincinnati plain.
No. 5 LeBlond plain, s. p. drive.

No. 14 American plain.
No. 3 Brown & Sharpe plain, (2).
No. 3 LeBlond plain.
No. 3 B. & S. vert., s. p. drive.

RADIALS AND DRILL PRESSES.

3' Fosdick radial, s. p. drive.
72" Niles, cone drive.
72" Dreses, motor drive.
22" Cincinnati b. g., power feed.

24" Hoefler, stationary head.
24" Rockford, sliding head.
30" Cincinnati, sliding head, t. a.
42" Bickford, stationary head.

PUNCH PRESSES AND SHEARS.

No. 2 Niagara.
No. 19 Bliss, o. b. inclinable. (3).
No. 2 Consolidated, o. b. inclinable.
No. 2-C Consolidated, o. b. inc.
No. 6 Whiting, single end.

No. 10 Badger.
No. 6 Long & Allstatter.
No. 3 Bliss double crank, 36" between housings.

PLANERS AND SHAPERS.

24"x 6' Powell 1 head.
30"x 6' Gray, 2 heads.
48"x36"x12" Cincinnati, 2 heads.

16" Smith & Mills shaper.
25" Smith & Mills, b. g.
24" Kelley.

MISCELLANEOUS.

Bolt cutters, 14" & 1" Acme.
Bolt cutter 24" Landis, lead screw.
Boring mill, 42" Bullard.
Boring mill, 10" Niles.
Boring mill, Fosdick 3" horizontal.
Chain hoists, various sizes, (50).
Gear hobber, 24" S. & S.

Grinder, 10x50 Norton.
Grinder, No. 6 Besly disc.
Grinders, No. 60 Heald, cyl., (3).
Grinders, LeBlond and Cinti. cutter.
Hammer, steam, 800 lb. Niles.
Millers, hand, (6).
Slotter, 10" Niles vertical.

Write for Stock List, containing about 300 items.

USED AND REBUILT MACHINERY

FOR SALE BY

A. F. Strafer, * * * **30 Church St., New York City**

BORING MILLS, VERTICAL.

- | | |
|-------------------------------------|------------------------------------|
| 10'-16" Niles extension type, b. d. | 84" Bickford, belt drive. |
| 14'-20" Betts, extension type. | 53" Niles-B.-P., rapid traverse. |
| 90" Niles, friction feed, b. d. | 42" Bullard, rapid traverse, m. d. |
| 100" Belts, heavy duty. | 60" Bullard, belt drive. |

BORING MILLS, HORIZONTAL.

- | | |
|------------------------------------|---------------------------|
| 6" bar, Bement Miles, floor type. | 6" bar, Niles, knee type. |
| 5" bar, Sellers, floor type, m. d. | 5" bar, Barrett cylinder. |

DRILL PRESSES.

- | | |
|--------------------------------------|----------------------------------|
| 7' Baush tapping attachment. | 310 Baker, heavy duty. |
| 6' Reed Prentice, latest, gear box. | 26" Kern, upright, s. h. & b. g. |
| 3' 6" Cincinnati, t. a., belt drive. | 3-spindle, Allen, h. s. |

GRINDERS.

- | | |
|---|-------------------------------------|
| 18"x96" Norton pl., arr. for motor dr. | 20"x120" Landis. |
| 10"x72" Norton plain, overhead, belt drive, complete equip. | No. 11 Brown & S. plain, 6"x32". |
| 6"x32" Norton plain. | No. 1 Landis universal, belt drive. |
| | Face grinder, Bridgeport 36"x8". |

HAMMERS.

- | | |
|-------------------------------|------------------------------------|
| 1500 lb. N-B-P. steam hammer. | No. 4 type "I" Nazel, motor drive. |
| 600 lb. Erie steam hammer. | No. 4-B Nazel hammer, motor drive. |
| 500 lb. Chambersburg, steam. | No. 3-B Nazel, arranged motor dr. |

TURRET LATHES.

- | | |
|------------------------------------|---------------------------------|
| Gisholt 24" modern, motor drive. | Greenlee 24"x26", chuck equip. |
| H. & O., 44" cap., bar equipment. | Steinle 24", new. |
| Jones & Lamson, 34"x36" bar equip. | Bardons & O., No. 4, wire feed. |

ENGINE LATHES.

- | | |
|---------------------------------------|--------------------------------------|
| 60"x40" Fifield, b. d. | 36"x14" Lodge & Shipley. |
| 48"x40" Bridgeport, g. h., q. c. | 36"x20" New Haven. |
| 52"x24" Putnam, triple grd., belt dr. | 24"x12" Prentice, geared head. |
| 36"x16" N.-B.-P., new, triple geared. | 17" and 19"x8" LeBlond, h. d., q. c. |
| 30"x20" Fitchburg, belt drive. | |

MILLING MACHINES.

- | | |
|--------------------------------|----------------------------------|
| Ingersoll 30"x8", 2 heads. | No. 2-B Brown & Sharpe, heavy. |
| No. 3-B Brown & S. hvy, plain. | Mfg. type, B. & S. heavy No. 13. |
| No. 2-Y Brown & Sharpe, plain. | Newton slab, 42"x15" table. |

PLANERS.

- | | |
|--|--------------------------------------|
| Niles-Bement-Pond modern electric rev. drive planers, sizes: | 36"x36"x 8' G. A. Gray, 2 hd., b. d. |
| 60"x60"x30" Pond, rev. m. d. | 36"x26"-16" and 14" heavy. |
| 60"x60"x14" Pond, rev. m. d. | 120"x144"x25" Sellers. |
| 48"x16" heavy. | 120"x120"x25" Niles, motor drive. |
| 50"-36"x22" widened. | 72"x72"x30" Sellers. |
| 42"x26"-42"x30" heavy. | 48"x48"x16" Woodward-Powell, 4 hds. |
| 36"x36"x14" G. A. Gray, 2 hd., b. d. | 30"x 8' D. & H. openside. |

PUNCHES AND SHEARS.

- | | |
|--|--------------------------------------|
| Alligator, No. 4 Doelger & K., 5" cap. | No. 4 H. & J., dbl., 48" thr., m. d. |
| No. 17 Williams & White, 34" tht. | Cleveland type X, 60" throat. |
| No. 6 Hilles & Jones, 72" thrt., m. d. | Angle shear, H. & J., 6"x1" cap. |
| No. 5 Hilles & Jones, 48" t., m. d. | Rotary, Gray No. 1-3/16" cap. |

ROLLS.

- | | |
|--|-----------------------------------|
| Newbold straightening 72" and 66". | 10" Southwork, cap. 1 1/2" plate. |
| 20" Hilles & Jones, cap. 1 1/2" plate. | 7" Sellers, cap. 1 1/2" plate. |

MISCELLANEOUS.

- | | |
|--|-----------------------------------|
| Core wire straightener, 1/2" to 5/16". | Lathe, Lo-Swing 8"x9". |
| Crane, 15 ton Brown hoist Locomotive. | Plate planer, 25' H. & J. No. 6. |
| Hydraulic forging press, 1200 tons. | Slotter, 18" Bement Miles. |
| | Tapping attachment, 1" Errington. |

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No. 13 Pratt Whitney 12 spdl.. 900.

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18"x8' Reed P., grd. hd., m. d. 675. motor drive..... 1750.

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MISCELLANEOUS.

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Gear cutter, No. 4 B. & S..... 800. Shear, 836 Niagara, pwr. sq.... 525.
Header, No. 2 Wtby., fl., d.s., s.d. 750.

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Automatic screw machine, Brown & Sharpe No. 19, (4) each.....\$ 550.
Automatic screw machine, Brown & Sharpe No. 00, slotting..... 500.
Automatic screw machine, Brown & Sharpe No. 00, no slotting..... 450.
Automatic screw machine, Brown & Sharpe No. 0, no slotting..... 550.
Automatic screw machine, Brown & Sharpe No. 2, no slotting 650.
Bolt cutter, 2" double head Detrick & Harvey (2) 300.
Boring mill, Morris horiz., motor drive, with motor 1-15/16" spindle... 1000.
Drill presses, No. 310 Baker heavy duty, (5), each..... 250.
Drill press, 24" Minster heavy duty..... 350.
Drill press, 36" Aurora, sliding head..... 250.
Grinder, No. 2 Brown & Sharpe, surface..... 350.
Grinder, Detroit centerless No. 4B, 2 years old 1500.
Header, 8" Acme (Chapin) clutch..... 350.
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Lathe, 14"x8' Hendey, with taper and chuck 500.
Lathe, 18"x8' Prentice q. c. all g. h., s. p. d. with chuck..... 600.
Lathe, 18"x8' South Bend std. change..... 375.
Lathe, 18"x8' Carroll, quick change, d. b. g., 2 chucks..... 450.
Miller, No. 2 Cincinnati plain..... 600.
Miller, 42" Briggs (Gooley & Edlund)..... 500.
Miller, No. 2 Kempsmith plain, quick change..... 450.
Miller, No. 3 Oesterlein plain, q. c., 24x9x19 425.
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Punch, 48" throat Kling, one through one..... 800.
Saw, No. 1 Cochrane & Bly cold saw, with 2 saw blades..... 175.
Shaper, 7" Rhodes vertical..... 175.
Shaper, 7" Rhodes horizontal..... 235.
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Turret lathe, 21" Gisholt, complete with chuck and equip., good cond... 500.

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Air compressor 4"x5" Caldwell, 2 cyl.
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Blowers, pos. pressure, 5" outlet.
Bolt cutters, 1", 1 1/2", 2", 3" & 4".
Bolt cutter, 1 1/2" Reliance, dbl. head.
Bolt cutter, 1 1/2" Acme, 3-spindle.
Bolt cutter, 2" Landis, 1-spindle.
Boring mill, Rockford, 3" bar.
Boring mill, 42" Bullard, 2 heads.
Bulldozers, Nos. 4, 5 & 7 W. W.
Bulldozer, No. 7 Ajax.
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Drill, radial, 5' Prentice, t. a., m. d.
Drill, 8-sp. Baush, rd. hd., belted.
Drill, heavy gang, 4-sp., 12' table.
Drill, 20" Silver, b. g., fig. 62.
Drill, 22" Aurora upright.
Drills, 30" Barnes, sliding hd., b. g.
Drill, radial, 4' & 5' Western, m. d.
Exhausters, No. 8 Buffalo.
Forging mch., 1 1/2" Acme, iron bed.
Forging machine, 3" Acme, steel bed.
Gear cutter, No. 6 B. & S., cap. 72".
Gear cutter, No. 11 universal Dwight.
Gear cutter, No. 3 S. & C., auto. 1x1".
Gear hobber, No. 4 Farwell, A-1.
Generator, 100 k. w., 240 v., d. c., connected to horiz. steam engine.
Grinder, No. 60 Heald internal.
Grinder, disc, 18" wheels, opposed.
Grinders, No. 1 Cincinnati universal, cutter and tool.
Grinder, Yankee drill, style A.
Hack saw, Acme, 18" blade.
Hammer, 100 lb., single fr., steam.
Hammer, 2000 lb. Erie, single frame.
Hammers, 40, 80 lbs. Bradley.
Keyseater, 24" Morton, cap. 2 1/2".
Lathe, 36"x16" New Haven.
Lathe, 28"x12" Fay & Scott.
Lathe, 24"x10" S. & B., q. c. g.
Lathe, 20"x10" Rahn-L., q. c. g., t. a.
Lathe, 20"x8" Am. t. a., g. h., for m. d.
Lathe, 18"x12" L. & S., q. c. g., t. a.
Lathe, 18"x8" Lodge-S., g. h., pan.
Lathe, 16"x8" Bradford, pl. change.
Lathe, 16"x6" Ffether, taper att., ch.
Lathe, 15"x6" South Bend.
Lathe, 14"x6" Monarch, plain change.
Lathe, 12"x8" Reed-P., g. h., s. p. d.
Lathe, 13"x6" South Bend, m. d.
Lathe, speed, 11"x4" Prentiss, t-rest.
Lathe, dbl. end, 32" swing for motor.

58 Water St., Pittsburgh, Pa.

Lathe, 28"x12" Fay & Scott, cheap.
Lathe, 42"x22" Bridgeford, m. d., g. h.
Miller, No. 3 1/2 Fox, hand, 24"x6"x14".
Miller, No. 04 Cin. pl., 18"x6"x15".
Miller, Hendey Lincoln No. 2 1/2.
Miller, Knight duplex, tbl. 8 1/2"x32".
Miller, No. 0 Kempsmith universal.
Miller, vertical No. 0 & 1 Bickett.
Miller, vertical, Becker "C".
Miller, bench, No. 3 Burke.
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Miller and drill, No. 2 Knight vert.
Millers, hand, Whitney, (2).
Motor, 3 1/2 h. p., 220 volts, d. c., 450/1800 rev.
Oil separators, 1 and 2 bu. capacity.
Pipe machines, 8", 6", 2" Oster.
Pipe machine, 6" Jarecki, s. p. d.
Planer, openside 42"x42"x16", 3 lds.
Planer, 24"x24"x5' New H., 1 hd.
Planer, 48"x48"x16" belt or motor.
Press, No. 18 Bliss, o. b. i., bench.
Press, No. 1 Toledo, o. b. i., for mtr.
Press, No. 10 Bliss o. b. i., bench.
Press, No. 11 Perkins, pl. trim., 4" str.
Press, No. 59 Toledo, side shear, m. d.
Press, No. 82 Consolidated horning.
Punches, Nos. 51 & 55 Beloit.
Punch, No. 124-A Niagara, 15"x1 1/2".
Punch & s., No. 6 L. & A. 6" thrt., d. e.
Punch & s., No. 3 L. & A. 15" thrt., s. e.
Punch & s., E. F. Cleve. 36" thrt., s. e.
Punch & s., No. 2 H. & J. 20" thrt., s. e.
Punch, structural, steel pl. for coping.
Riveter, 1" Shuster, style A.
Riveter, 80-A Grant, cap. 1".
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Shear, Quickwork, Nos. 3 & 6 m. d.
Shear, squaring, Robinson, 53"x18 ga.
Shear, 18" gap, capacity 80"x16 ga., Bertsch.
Turret, 24" Gisholt, 8 1/2" h. s., t. a.
Turret, 28" Gisholt, t. a.
Turret, vert. 30" Bullard & Colburn.
Turret lathe, 2x24" J. & L.
Turret lathe, No. 1 Bardons & O.
Turret lathe, 18" B. & O., fr. hd.
Turret lathe, P. & W. bench.
Valve tapper, 4" Pottstown, 3-w., m. d.

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Bennett Machinery Co.,

Brake, 8' Robinson, 18 gauge.
Friction saw, No. 3 Ryerson, d. c.
Lathe, 36/60"x12' Harrington, gap.
Lathe, 30/52"x12' removable gap.
Lathe, 40"x12' Putnam, triple grd.
Lathe, 20"x15' Reed, 11' centers.

30 Church St., New York City

Lathe, 24"x10' LeBlond, quick chg.
geared, taper.
Punch and shear, No. 2 L. & A.
double end, 24", 1" thru 1", \$1000.
Radials, 6' Pond, 4' Dreses.
Shaper, 24" Cincinnati, 48" Morton.

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Farrell 14"x24", stroke 8", Ferracute
No. 3 & D52; multiple punch, hand
7/16" thru 1", kick press and
arbor presses.
Lathe, wood turning, lot of extras.

35 S. Clinton St., Chicago, Ill.

Hack saws, 6"x6" Racine, No. 1
Marvel, No. 2 Robertson, 6"x6",
geared.
Lathes, L. & S. 30"x26", and Flathers
14"x6".
Punch presses, double crank, 24"x36".

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Bolt cutter, 2" Acme, double head.
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Boring mill, 42" Bullard, power rap-
id traverse.
Boring mill, 102" Poole.
Boring mill, 5" bar Barrett.
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Drill, No. 1 Avey, ball bearing.
Drills, 24" & 32" Cincinnati.
Drill, No. 25 Foote-Burt high speed,
ball bearing.
Drill, 3' Morris radial.
Drill, 5' Dreses radial.
Drill, 11' Lynd-Farquhar (wall).
Drill, No. 30 Natco multi spindle.
Drill, No. 13 Natco multi spindle.
Drill, 26" Barnes all-grd., 4-spindle.
Gear cutter, 6" Gleason generator.
Gear cutter, 36" Gould & Eberhardt,
spur & bevel.
Grinders, 3"-6"-10" Norton plain.
Grinder, 12" Cincinnati universal.
Grinder, No. 2 Natco cutter & tool.
Grinder, No. 60 Heald cylinder.
Grinder, No. 22 Heald surface.
Grinder, 14" Pratt & W. surface.
Grinder, No. 6 Besly disc.

Lathe, 14"x 6' Lodge & Shipley.
Lathe, 14"x10' Lodge & Shipley.
Lathe, 16"x 6' American.
Lathe, 17"x16' LeBlond.
Lathe, 16"x 8' LeBlond.
Lathe, 20"x12' American.
Lathe, 24"x10' American.
Lathe, 24"x10' Lodge & Shipley.
Lathe, 30"x12' Lodge & Shipley.
Lathe, 38"x20' Schumacher-Boye.
Lathe, 26"-44"x16' McCabe, dbl. sp.
Planer, 24"x 6 & 8' Ohio.
Planer, 30"x10' Flather.
Planer, 36"x10' Woodward & P.
Planer, 48"x12' Powell.
Planer, 48"x36"x12' Cincinnati.
Planer, 60"x44"x12' Pond.
Planer, 72"x54"x20' Pond.
Presses, Nos. 2, 4 & 5 V. & O.
Screw machines, auto. 4", 3 1/2", 4 1/2"
Gridley.
Screw machines, auto. 7", 8", 14",
24", 4 1/2", 6" Cleveland.
Shapers, 16", 20" & 24" Cincinnati.
Shaper, 20" American.
Turret machines, 1 1/2", 2 1/2", 3 1/2" Acme.
Turret machines, 2 1/2" & 3 1/2" J. & L.

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FOR SALE BY

M. A. Wertman Mchy. Co., 505 Superior Bldg., Cleveland, Ohio

Bolt cutter, 14" Landis double, with lead screws, excellent condition.
 Broach, No. 3 J. N. Lapointe hydraulic, perfect condition.
 Brinnell testing machine, Olsen, bench type hydraulic.
 Drills, 10" Rockford, bench type, 100% new, (2).
 Drill, No. 310 Baker, heavy service, 90% new.
 Grinder, model A 6"x20" Fitchburg, plain, 90% new.
 Miller, No. 14 Garvin duplex, excellent condition.
 Millers, hand, Miller & Crowningshield, power feed, (2) excellent.
 Planer, 30"x36"x12" Detrick & Harvey openside.
 Screw driver, Reynolds automatic, excellent condition.
 Spline miller, P. & W. 4", excellent condition.

FOR SALE BY

Wm. C. Johnson & Sons Machinery Co.,

1211-1223 N. 12th St.,

St. Louis, Mo.

GEAR CUTTERS.

30" Flather, spur. No. 1 Schuchardt & Schutte.
 No. 1 Farwell hobber. 42" Gear hobber.

SCREW AND TURRET MACHINES.

No. 1 Pratt & Whitney, (2). 2"x24" J. & L., geared head.
 No. 2 Wood tilted turret. 3"x36" J. & L., geared head.
 No. 3 Wood tilted turret. No. 6 W. & S., friction head.
 No. 4 Wood tilted turret. 24" Greenlee.
 14" Smurr & Kamen. Acme Fox monitor lathe,

DRILLING MACHINES.

3' arm Canedy-Otto post drill. 24" Aurora.
 20" Champion. 32" Mechanics, sliding head.
 23" Barnes. 34" Bickford, sliding head.
 22" Barnes sliding head. 4-spindle Allen, h. s.

PLANERS.

24"x24"x 6' Powell. 36"x36"x10' Flather, 2 heads.
 32"x32"x10' Cincinnati, 2 heads. 48"x48"x14 Pond.

MILLING MACHINES

No. 14 Brown & Sharpe. No. 12 Kempsmith.
 No. 14 Knight vertical. No. 25 Becker.
 No. 3 Oesterlein plain. Owen duplex.
 No. 3 Cincinnati plain.

LATHES.

10"x 5' Star bench, t. a. 26"x12' Putnam.
 15"x 6' Monarch, q. c. g. 44"x24' Pond, triple geared.
 17"x 7' Oliver heavy duty.

GRINDERS.

10"x30" Webster & Perks, univ. No. 50 Gardner, disc.
 30"x84" Diamond face. No. 16 Brown & Sharpe plain.
 No. 1 Fraser surface. 8" Heald rotary, magnetic chuck.
 5"x18" Ott. Washburn twist drill grinder.
 Schmidt auto. cylinder.

PRECISION TOOLS.

No. 31-7" swing Stark bench lathes. No. 3 Langelier swaging machine.
 No. 41-9" swing Stark bench lathes. No. 1 Dayton swaging machine.

MISCELLANEOUS.

Acetylene generator, 100 cu. ft. cap. Metal saw, Espen-Lucas 31".
 Air compressors, (16). Post hammer, Pettingell.
 Belt lacers, 9" & 12" Peerless. Presses, No. 19 Bliss, (3).
 Bolt cutter, 1" Landis. Presses, No. 20 Bliss, (2).
 Boring mche., hor., No. 2 P. & H. Punch, No. 7 Long & A., 4" throat.
 Bulldozer, 75 ton Lourie hydraulic. Riveter, Shuster, model A, 3".
 Eye bender, No. 2 Williams-White. Shear, 62", 18" gap, No. 10 ga.
 Furnace, 400 lb. Hausfeld non-crucible brass melting. Taper rolling mche., No. 2 Hess.
 Furnaces, Stewart cyanide hardening. Tapping machine, No. 1 Garvin.
 Keyseater, No. 2 Mitts & Merrill. Turret machine, 24" Greenlee.
 Wheel press, 90", 300 ton.

USED AND REBUILT MACHINERY

FOR SALE BY

Severin-Tripp Machinery Co.,

Boring mill, 53" Niles.
Boring mill, 72" Niles, m. d.
Boring mill, 12" Betts.
Brake, 8" Ohl, 16 gauge.
Crane, 5-ton, 45' span, 140' runway.
Crane, 5-ton, 52' span, 170' runway.
Gearcutter, 36x9 Gould & Eberhardt.
Grinder, knife, 120".
Hammers, Nos. 3B & 4B Nazel.
Hammer, 400 lb. Chambersburg.
Lathe, 15" x 6' Champion.
Lathe, 24" x 12' Prentice, geared hd.
Lathe, 30" x 12' American.
Lathe, 35" x 12' Bridgeford.
Lathe, 42" x 22' Bridgeford.
Lathe, gap, 15" x 36" x 8" Fay & Scott.
Miller, No. 3 B. & S. vertical.
Miller, No. 2 Cincinnati universal.
Miller, No. 2 B. & S. universal.

25 Church St., New York, N. Y.

Pipe machines, 6" & 8" Saunders.
Pipe machines, 4" Bignall & Keeler.
Planer, 36" x 16" Pond, m. d., d. c.
Planer, 36" x 36" x 26" Pond.
Planer, 42" x 42" x 26" Pond.
Planer, 72" x 72" x 30" Sellers, b. d.
Punches, No. 4 Hilles & Jones, 48" throat, (2).
Punch, No. 4 Hilles & J., dbl. end.
Radial drill, 30" Gang.
Radial, 3' Bickford.
Radial, 6' Bickford.
Riveters, Hanna, (3).
Rotary planer, Cleveland.
Shaper, 24" Steptoe.
Shear, No. 60 Quickwork.
Straightening rolls.
Turret lathes, 21" Gisholt, (2).
Upsetter, Acme B., 1 1/4" cap., m. d.

FOR SALE BY

The Hess-Schenk Company, 3868 Hamilton Ave., Cleveland, O.

DRILL PRESSES.

14" Allen, plain bearing.
20" Davis, with p. f.
25" Barnes, sliding hd., b. g., p. f.
4" Hammond, h. s., b. b. radial, with tapping attachment.
4-spd. 14" Leland, h. s., b. b. sens.

4-spindle 14" Avey h. s., b. b. sens.
4-spd. 14" Henry & Wright model K., h. s., b. b. sensitive.
4-spd. 20" Barnes, stationary head, power fd. to spindles, 14x60 table.

PRESSES.

No. 54 Toledo straight sided geared press, 6" stroke.

No. 5 Greenerd arbor press.

AUTOMATICS AND TURRET LATHES.

No. 4 Warner & Swasey universal turret lathe, with equipment.
No. 515 National Acme automatics.
No. 53 National Acme automatic, with motor drive.
2" Model B Cleveland automatic, 18" feed.

MILLING MACHINES.

No. 6 Whitney hand miller.
No. 2-A Becker vertical.
No. 2 Cleveland, sgl. pul. dr., univ.

No. 1 1/2 Hendey plain, cone type, back geared.
No. 1-B Kearney & Trecker univ.

GRINDERS.

6x32 Norton plain cylindrical.
No. 205 Rivett radial grinder.
No. 1 Brown & Sharpe universal.

10x52 Landis pl. cylindrical grinder, self-contained countershaft.

PLANERS AND SHAPERS.

34" Averbek back geared crank shaper.
24" Hendey friction geared shaper.
24x24x6 G. A. Gray planer, one head on rail.
30x30x6 G. A. Gray planer, one head on rail, one head on right hand side housing.

LATHES.

7x32 No. 3 Cataract bench.
12"x 5" Seneca Falls, c. r.

16"x 6" Van Wyck, compound rest.
30"x 12" Draper, compound rest.

MISCELLANEOUS.

Bolt cutter, 1 1/2" Landis, double hd.
Bolt cutter, 1 1/2" Acme.
Boring, drilling & milling machine, No. 1 Cleveland horizontal.
Circle shear, No. 17 Niagara.
Circle shear, No. 110 1/2 Bliss.

Die sinker, No. 2 Pratt & Whitney.
Notching press, No. 1 Bliss.
Notching press, No. 2 Bliss.
Sheet metal cutter, No. 2-36" Gray.
Spline miller, 4" Pratt & Whitney.

USED AND REBUILT MACHINERY

FOR SALE BY

Clark Machinery Co., 1235 St. Clair Ave., Cleveland, O.

We offer the following real bargains:

Grinders, Pratt & Whitney 6"x48" plain cylindrical, (2), each.....	\$ 250.
Grinder, No. 6 Bryant chucking grinder.....	100.
Milling machine, Cincinnati 18" automatic.....	300.
Milling maches., Kempsmith No. 32 manufacturing, with pump, (3) each	125.
Planer, 26"x26"x 7' Gray.....	600.
Planer, 28"x28"x 8' Gray.....	675.
Screw machines, Foster No. 6, with power feed to both turret & cut-off.	500.

FOR SALE BY

Tubor, Velick & Co., Inc., - - 628-630 W. Lake St., Chicago, Ill.

Telephones: Monroe 4199-6813. No Branches

PUNCH PRESSES.

No. 0 V. & O.	No. 19 Bliss.
No. 3 Niagara, (3).	Long & A. horn punch, cap. 1½x1.
No. 5 Niagara, o. b. i., (3).	Swaine geared, (2).
No. 5 Niagara, geared.	No. 5 Rockford, (2).
No. 5 Jordan, geared.	Bliss bench presses, (5).
18-C Bliss.	Ryerson 4' radial.

DRILL PRESSES.

14" Excelsior.	30" Reed-Prentice.
20" b. g., p. l., new, \$130.	Bench type drills.
20" drill presses (40), each \$40.	3½' Hilbert radial.
26" Weigel.	3½' Bickford radial.

MILLING MACHINES.

No. 4 LeBlond plain. A number of hand millers.

No. 2 Cleveland universal, s. p. dr.

LATHES.

16"x 6' Hamilton, q. c., (2).	22"x10' Cisco, q. c.
16"x 6' Sidney, q. c., (2).	24"x10' LeBlond, extra turret att.
16"x 8' Monarch, q. c.	28"x12' Prentice.
17"x 9' Chard, q. c., (9).	10", 12" and 14" Shepard screw cut-
18"x 6' Lehmann, q. c., (2).	ting, quick change.
24"x10' Canadian, q. c., d. b. g., (3).	

PLANERS.

30"x30"x12' Niles-B.-P., 2 heads. 36"x36"x 7' Flather, 2 heads.

SCREW MACHINES.

B. & S. No. 00 automatics serials	Pratt & Whitney, hand, (3).
2100 to 4300.	Nos. 1, 2, 3 and 4 Fosterscrew mchs.
No. 2 Smith, hand.	

GRINDERS.

Bath universal, with magnetic chk. Emery grinders, \$2 and up.
Gardner No. 6 disc grinder.

WOOD-WORKING MACHINERY.

Band rip saw, West Side.	Shapers, double spindle, Whitney
Boring mills, Andrew, (3).	and Fay.
Moulders, 8" Yates C-4, (2).	Swing saws, Porter, (4).
Shapers, Advance dbl. spdl., 5 h. p.,	Saw table and jointer combined,
a. c. motor in base, (6).	portable.
Saw tenoners, Pettingell.	

MISCELLANEOUS.

Boring mill, 36" Colburn.	Pressed steel stools, with backs.
Brakes, 8", (2).	Saw mandrels, \$3.
Hack saws.	Shear, No. 196 Niagara, 8', power.
Motors, 75 h. p. G. E., a. c., slip ring,	Spot welder, 12" Winfield.
400 r. p. m., (2).	Spot welder, 48" Toledo, 40 k. w.,
Motors, a. c. and d. c.	220 volt, 3 phase.
Pressed steel hangers and bearings,	Thread hobber, Pratt & Whitney.
all sizes.	Time clocks, International.
Pressed steel bench legs, (1,000).	Woodworking machines.
Leather belting.	Pulleys, shafting and hangers.

USED AND REBUILT MACHINERY

FOR SALE BY

McDonald Machinery Co., 1531-33 N. Broadway, St. Louis, Mo.

Clock, electric time system.
Demagnetizer, Walker.
Diesinker, Pratt & Whitney No. 2.
Drills, Baker and Rockford heavy duty.
Drills, Leland-Gifford 2 and 3 spindle, h. s., b. b.
Drill, Detroit 5-spindle horizontal.
Drill, Gardam 12-spdl. adjustable.
Drills, Demco, H. & W., Kokomo 1-spdl., Sipp 1 & 2-spdl., h. s., b. b.
Drills, 20", 24", 34" b. g., & tapping.
Filing mche., Cochrane & Bly No. 2.
Furnace, Holcroft 92 k. w., annealing.
Gear shaper, Fellows 36".
Grinder, Heald No. 60 cylinder.
Grinders, P. & W. 14" vertical surface; Ott 5"x18"; Landis 12"x48" plain; Norton 10"x24" pl.; Modern internal; Heald No. 60 cylinder. (2)
Grinder, Hoe surface, with magnetic chuck.
Hack saws, 4x4, 6x6 & 6 Racine Jrs; Atkins 8x8" high speed.
Lathes, Davis 22"x10"; Star 12x5, L. & S. 16"x6" tool room.
Planers, Gray 28"x28"x6", 1 head.

Punches, Wetterhahn 18", throat 4" in 4"; Long & A. No. 6, 4" in 4".
Punch presses, Bliss Nos. 18 & 20; Toledo No. 1; Niagara No. 6, o. b. i.; Swaine, Nos. 29, 33 and 37.
Rivet spinner, Grant 3/16".
Milling machines, Kempsmith No. 2; Ohio No. 20 plain; Becker "SD" vertical, rotary table, 17200 lbs.; Cin'ti No. 3 pl.; American No. 14 univ.; B. & S. No. 1 pl.; B. & S. 14; Ohio 34; LeBlond No. 3-H plain; Brown & Sharpe, plain.
Screw machine, Gridley 1-spdl. 24" auto.; Cleveland 18" auto.; P. & W. No. 24 hand; Foster No. 3 hand; Woods No. 2 tilted turret head; Bardons & Oliver No. 7; B. & S. No. 2 automatic.
Shapers, 15" Kelly; 24" Walcott; 16" Steptoe; 24" Barker; 14" Steptoe Shears, 60" thrt. rotary slitting. (2).
Tapping mche., Garvin Nos. 2 and 2-RG auto.
Welders, 20 k. w. spot, Winfield.
Welders, butt, Federal, 3" rds.

FOR SALE BY

The Randle Machinery Co., 1733 Powers St., Cincinnati, Ohio

Automatic, 4-spindle Acme, 1 1/2" capacity.
Automatic, No. 54 Acme.
Automatic, 4 1/2" Gridley single spindle.
Bolt cutter, 4" Acme, rebuilt, m. d.
Boring mill, Niles 5' camel back, spindle type, b. d.
Boring mill, Niles 72" vertical, 2 heads, b. d.
Drill, 6" Niles universal, m. d.
Drill, Cincinnati-Bickford, 3 1/2" radial, s. p. d., g. b.
Drill, 24" Cincinnati upright, s. h.
Lathe, 18"x10" LeBlond, q. c., 6"x14" gap.
Lathe, 24" Gisholt, 6 1/2" bore, b. d.
Lathe, 25" Gisholt, 3 1/2" bore, m. d.
Lathe, 34" Gisholt, 4 1/2" bore, m. d.
Lathe, 24"x8" Schumacher-Boye, l. c., rebuilt.
Lathe, 18"x6" loose change, rebuilt.
Milling machine, No. 3 LeBlond, heavy duty, s. p. d. & v. a., plain.
Milling machine, No. 2 LeBlond cone drive, plain.
Planer, 18"x18"x38" Putnam, b. d., one head.
Planer, 36"x38"x16" Gray, 3 heads.
Planer, 32"x32"x16" Gray, 2 heads.
Planer, 30"x30"x16" American, 2 heads.
Planer, 26"x26"x12" Whitcomb, 2 heads.
Pipe machine, No. 94 Merrill, driven with gasoline engine.
Shaper, 16" new Whipp, belt drive.
Shaper, 20" new Whipp, belt drive.
Shapers, 16" Cincinnati, b. d., rebuilt.
Shaper, 15" Kelly, b. d., plain crank.
Shaper, 25" Smith & Mills, b. g., belt drive.
Turret lathe, 3x36 J. & L., grd. head, chucking type.

New Boilers, 3 to 30 h. p. at right prices.

Also many other tools. Send us your inquiries.

USED AND REBUILT MACHINERY

FOR SALE BY

Taylor-Hall Welding Corporation, 3 May St., Worcester, Mass.
WELDERS.

Spot and Butt Welders

We offer rebuilt and fully guaranteed spot and butt welders as listed below:

One No. 0 Toledo butt welder, capacity $\frac{1}{2}$ " round stock.

One No. 2A Thomson automatic butt welder, capacity No. 8 wire, 1000 welds per hour.

One No. 2A Thomson hand butt welder, capacity $\frac{1}{2}$ " round stock.

One No. 3 Toledo butt welder, capacity $\frac{1}{2}$ " round, $2\frac{1}{2}$ " x $\frac{1}{2}$ " flat stock.

One No. 10-A-6 Thomson butt welder, capacity $\frac{1}{2}$ " round.

One No. 20-A-10 Thomson butt welder, capacity $1\frac{1}{2}$ " round or 2" pipe.

One No. 7C Toledo butt welder, capacity $\frac{1}{2}$ " round or $2\frac{1}{2}$ " x $\frac{1}{2}$ " flat.

One No. 40-A-2 Thomson butt welder, capacity 2" round.

One No. 21 Thomson automatic butt welder, capacity one thousand $\frac{1}{2}$ " diameter wire rings, etc., per hour.

One No. 240 Thomson spot welder, 20 k. w.

One No. 10-A-7 Thomson butt welder, capacity $\frac{1}{2}$ " round.

One No. 75-P. A. Thomson spot welder, capacity two $3/16$ " thicknesses.

FOR SALE BY

Brownell Machinery Co., 150 Pine St., Providence, R. I.

BORING MILLS.

No. 1 $\frac{1}{2}$ Beaman & Smith boring, drilling and milling.

24" Bullard rapid production, vertical.

GRINDERS.

No. 11 B. & S. plain, 4x30.

No. 2 Morse universal 12x30.

No. 2 Norton tool & cutter.

No. 1 Norton tool & cutter.

No. 3 B. & S. cutter & reamer.

No. 2 B. & S. cutter & reamer.

No. 1 B. & S. automatic surface.

GEAR CUTTERS

No. 13 Brown & Sharpe 18x4.

No. 3 Brown & Sharpe, 26x8.

MILLING MACHINES.

No. 1 Kempsmith univer al.

No. 2 Brown & Sharpe heavy. plain.

No. 3 Brown & Sharpe plain.

No. $\frac{1}{2}$ Van Norman duplex.

No. 2-A Becker vertical.

No. 2 B. & S. vertical spindle.

No. 4 Thurston die miller.

Several Brown & Sharpe vertical attachments for milling machines.

PLANERS AND SHAPERS

48"x72"x20' Gray, 4 heads.

36"x36"x12' Gray, 2 heads.

30"x30"x8' Bement Miles, 2 heads.

30"x30"x6' D. & H. open side.

17"x20"x4' Whitcomb-Blaisdell.

15" Potter & Johnston shaper.

15" Springfield shaper.

7" Rhodes shaper.

PRESSES

No. 19 Bliss inclinable.

No. 68 Bliss d. a., cam.

No. 1 Bliss, d. a., cam.

Torrington double acting.

No. 1 Standard power screw.

No. 3-A Adams hand screw.

No. 2 $\frac{1}{2}$ Adams screw.

100 lbs. Plain drops.

500 lbs. Miner & Peck plain drop.

Taylor & Fenn spring foot presses.

No. 3 $\frac{1}{2}$ Greenerd arbor press.

SCREW MACHINES.

No. 52 National-Acme automatic.

No. 53 National-Acme automatic.

No. 6 B. & S., g. f. h.

No. 4 B. & S. plain head.

No. 2-F B. & S. constant speed.

No. 0 B. & S. wire feed.

MISCELLANEOUS.

Band saw, 12" H. & R. metal cutting.

Broaching mche., No. 2 Lapointe.

Lathe, 14"x16"x6" Reed tool room.

Lathe, 16"x6" Monarch engine, q. c. g.

Lathe, 20"x10" Monarch engine, q. c. g.

Magnetic chucks, Taft-Peirce No. 810

rectangular, 110 v., d. c.

Rolling mills, 6x10 Standard; 12x20.

Piston and piston ring machine,

No. 2 Potter & Johnston.

Power hack saw, 13"x16" Peerless, h. s.

Power hammer, Beaudry Champion,

300 lbs.

Swaging machine, No. 2 Langelier.

Slotter, 12" Bement Miles.

Turret lathe, 3"x36" J. & L. flat.

USED AND REBUILT MACHINERY

FOR SALE BY

Foster Machinery Company,

10203 Quincy Ave., Cleveland, O.

Bolt cutter, 1½" Acme.
Boring mill, vertical, 42" Bullard.
Grinder, No. 60 Heald, cylinder.
Grinder, Greenard, tool & cutter.
Hack saws, 12x12 Racine.
Lathe, 16"x6" Monarch.
Lathe, 18"x8" Lodge & Shipley.
Miller, No. 00 Brown & S., hand.

Planer, 28"x26"x8" Gray.
Press, No. 3 Stiles.
Riveter, High Speed No. 3-A, heavy duty.
Shear, 11"x16 ga. Streine.
Shear, alligator, Canton, cap. 1½" sq.
Shear, slitting, 36"x18" gap, foot.
Trolleys, I-beam, 1 & 2 ton.

FOR SALE BY

Brown Machinery Co.,

2323 N. 9th St., St. Louis, Mo.

Buffing lathes, Hisey and U. S., 3 h. p. 3 phase, 60 cycle, 220 volts.
Drill, 24" Aurora, sliding head, tapping attachment.
Drill, Baush No. 3 multiple, cap. 30 spils., rectangular hd. 20x40".
Drill, radial, horizontal, No. 1 Barnes, double end.
Grinder, cylinder, No. 60 Heald.
Grinder, No. 14 Gardner, b. b., disk, dry, 20" disks.
Grinder, No. 6 Besly two-spindle disk, 20" disks.
Grinders, emery, St. Louis and Western, 100 new at 50% discount.
Hammer, size A United, motor driven Pettingell.
Lathes, 20"x8" Reed, 16"x8" Monarch.
Lathe, 20"x8" Reed.
Lathe, turret, No. 4 Wood tilted, g. f. h., power feed, new.
Miller, No. 14 American universal, new.
Miller, No. 1B Fox, hand & pwr. fd., 18x6x14; new, never used.
Motors, 1 to 40 h. p., 3 phase, 60 cycle.
Planer, 60"x60"x20" Niles, 3 heads.
Polishers and buffers, drop head, New Britain.
Press, geared, No. 5 Stiles & Parker, weight about 9000 lbs.
Shear, Marshalltown No. 134 rotary splitting, cap. ½" plate; 4" throat; arranged for motor drive. Like new.

FOR SALE BY

J. E. Haetten & Co., Inc.,

50 Church St., New York, N. Y.

Automatics, 00 Brown & Sharpe, serials 1500, (2), each.....	\$ 400.
Automatics, 1-1" Cleveland model B, (8), each.....	100.
Automatic, 18" Cleveland model A, used 2 months.....	450.
Boring mill, No. 31 Lucas horizontal, 3 bars.....	2500.
Boring mill, 42" Bullard, motor drive, rapid traverse.....	1500.
Blue printer, Resolute 45" continuous, 30 amperes.....	400.
Box nailing machine, 12 nails 10 D, 36" range, used 4 months.....	600.
Drill, 6-spindle Avey, 6 chucks.....	600.
Drill, No. 1S Garvin Duplex horizontal.....	725.
Grinder, 18x36 Norton plain, c. s. drive, good.....	800.
Grinder, 10x36 Norton BA, built-in motors 220 v., 3 ph., 60 cycle, new.....	2500.
Hammer, 200 lb. Gould & Eberhardt, sheave lift.....	250.
Lathe, 1x36" Ames, c. r. turret, c. s. face plate, new.....	300.
Lathe, 14"x6" Hendey g. h., serial 18000.....	900.
Lathe, 14"x8" Prentice, s. b. g., q. c. g., chuck.....	225.
Lathe, 12"x6" Hendey, used 30 days.....	700.
Miller, No. 3 Cincinnati vertical, s. p. d. 95½.....	1100.
Miller, No. 20 Van Norman duplex centers, subhead mtr. used 3 mos.....	1500.
Miller, No. 2 Kempsmith plain c. s., used 2 months.....	850.
Miller, No. 2A Brown & Sharpe universal.....	1200.
Planer, 30x30x6 New Haven, 1 head, b. d.....	250.
Planer, 12" stroke, crank type, 12x18 table, 9" rise.....	50.
Saw, 6x6 Atkins Kwik Kut.....	60.
Shaper, 24" Gould & Eberhardt, s. p. d. Hi-duty.....	1200.
Welder, No. S-6-1 Taylor, 10 k. v. a. spot.....	300.

USED AND REBUILT MACHINERY

FOR SALE BY

B. L. Saltzman,

**{ 809 W. Lake Street, Chicago, Ill.
{ 524 W. Van Buren St., Chicago, Ill.**

Bolt threader, Geometric $\frac{1}{2}$ " to $\frac{1}{4}$ ".
Bolt threader, Geometric $\frac{1}{2}$ " to $\frac{1}{4}$ ".
Boring mill, No. 1 Barrett.
Drills, Silver 20".
Drills, Cincinnati b.g., taper att., 20".
Drills, Cincinnati dbl. b. g., 20".
Drills, Aurora 22".
Drills, 4-spindle, 14".
Drill, Fox multi spindle.
Gear hobber, No. 3-A Lees-B.
Gear generators, No. 6 & 11 Gleason.
Grinder, No. 60 Heald internal.
Grinders, Taylor & Fenn cylinder.
Grinders, drill.
Lathes, Reed 16"x6".
Lathes, D. & W. Pond 16"x7".
Lathes, Lodge & Shipley 16"x10".
Miller, No. 5 Ingersoll.

Miller, No. 5 LeBlond.
Mills, No. 3 and No. 5 Cincinnati.
Planer, Whitcomb 42"x42"x12', 2 heads on rail.
Punch presses, Bliss, (Stiles type), No. 24.
Punch presses, Niagara No. 5.
Punch presses, Milwaukee No. 5.
Screw machines, Garvin No. 124.
Screw machines, Bardons & Oliver No. 4.
Screw machines, Foster No. 6.
Screw mchs., Warner Swasey No. 6.
Screw mchs., Pratt & W. hand.
Screw machines, Warner & Swasey, hand, Nos. 1 & 2.
Shapers, 12", 16" & 24".

Motors and Generators—Factory Transmission.

FOR SALE BY

Fitzsimmons & Cole Machinery Company

1208 House Building,

Pittsburgh, Pa.

Air compressor, Ingersoll 10x10, 150'.
Blower, No. 6 Buffalo cupola, b. d.
Bolt cutters, 19", 2", 24", 4" Landis.
Boring mill, 42" Bullard, b. d.
Boring mill, 76" Bullard, 2 hds., b. d.
Boring mill, 84" Pond, 2 hds., b. d.
Bulldozer, No. 25 W. & W., m. d.
Drill, radial, 6" Prentice, s. p. d.
Drill, 14" Hamilton upright, b. d.
Drill, 24" Cincinnati upright, sliding hd.
Drill, 38" Prentice upright, slid. hd.
Flanger, McCabe, $\frac{1}{2}$ " capacity.
Gear planer, 24" Gleason, bevel, b. d.
Gear planer, 48" Gleason, bevel, b. d.
Grinder, dbl. emery, wheels 18" dia.
Grinder, 16"x48" Landis, crankshaft.
Grinder, 16"x68" Landis, crankshaft.
Grinder, 16"x52" Landis, plain.
Grinder, No. 16 Blanchard.
Hammer, 50 lb. Mayer, upright.
Hammer, 200 lb. Beaudry, upright.
Hammers, 3-B, 3-B, 4-B & 4-N Nazel.
Keyseater, No. 0 Mitts & Merrill.
Lathe, 13"x6" South Bend, b. d.
Lathe, 16"x6" American, q. c. g., t. a.
Lathe, 48"x30" Pittsburgh, b. d.
Lathe, axle, Bridgeford, dbl. hd., m. d.
Lathe, car wheel, 42" Niles, double end, m. d.
Miller, duplex, 42" Niles, tbl. 14"x22".
Miller, plain, No. 3-B Brown & S.
Miller, plain, No. 4 Cincinnati.
Miller, slab, 34x20x14" Ingersoll.
Miller, univ., Oesterlein, 25x13x10".
Pipe machine, 12" Jarecki, b. d.
Planer, 36"x36"x24" Pond, 4 hds., b. d.
Planer, 48"x48"x16" Pond, 4 hds., b. d.
Planer, 72"x60"x18" Betts, 4 heads.

Planer, 96"x96"x20" Pond, 4 hds., m. d.
Planer, o. s., Cleveland, 36"x36"x16".
Planer, o. s., Cleveland, 48"x48"x12".
Planer, o. s., Cleveland, 48"x48"x20".
Press, baling hyd. No. 23-Plogemann Press, Ferracute P-1, 14" stroke.
Press, No. 374 Bliss, s. s., 6" stroke.
Press, toggle, No. 14 Bliss.
Punch, hor., Cleveland, 1" thru 1".
Punch, multiple, No. 5 H. & J., 10".
Punch & shear, 30" throat, $\frac{1}{2}$ " thru $\frac{1}{4}$ ".
Punch & s., Pels, type RBLUEF-26.
Riveter, Hanna, 18" thrt., 15" gap.
Riveter, Allen, 66" throat, 15" gap.
Riveter, stake, No. 6 Whiting, 48" thrt.
Rolls, angle bending, 6x6x14" K. & R.
Rolls, bending, 48"x4".
Rolls, bending, 6"x4" N.-B.-P.
Sand blast, MacLeod, 36"x36".
Saw, cold, 20" Higley.
Shaper, 16" Gould & Eberhardt, b. d.
Shaper, 20" Cincinnati, b. g., b. d.
Shaper, 24" Gould & Eberhardt, b. d.
Shear, angle, L. & A., cap. 8"x8"x14".
Shear, alligator, United, cap. 14" sq.
Shear, bevel, Lenox $\frac{1}{2}$ ".
Shear, guil., No. 3 H. & J., cap. 24" sq.
Shear, rot., No. 1104 Bliss, 3/16" cap.
Shear, rotary, No. 6 Quickwork, $\frac{1}{2}$ ".
Shear, rotary, No. 3 Quickwork, $\frac{1}{2}$ ".
Shear, 10"x14" Cincinnati, m. d.
Shear, 7"x14" United, b. d.
Shear, 36"x3/16" Cincinnati, m. d.
Straightener, bar, No. 3 K. & R.
Straightener, beam, No. 4 H. & J.
Straightening rolls, United, cap. 12 ga.
Testing machine, 100,000 lbs. Riehle.
Testing machine, 500,000 lbs. Olson.

USED AND REBUILT MACHINERY

FOR SALE BY

J. Bleser Mfg. Co.,

16th & Madison Sts., Springfield, Illinois

Lathe engine, 14x6' Monarch, q. c.
Lathe, eng., 15x6 Le Blond tool room.
Lathe, engine, 16x8 G. & K., q. c.
Lathe, 28x12 Bridgeport.
Lathe, 32x16 Prentiss, l. c. gears.
Miller, Cincinnati No. 3 univ., O. type.

Miller, No. 2 Hendey univ., compl.
Millers, bench, No. 3 Burke; Rock'd.
Planer, 22x22x4' Pond.
Press, arch, No. 3A Walsh, 3" str.
Press, No. 31 Swaine, o.b.i., 14" str.
Shaper, crank, 16" Barker.

FOR SALE BY

McMullen Machinery Company,

Grand Rapids, Mich.

Automatic, 1" Cleveland.
Band saw, Napier, metal.
Cut-off saw, No. 4 N. & B.
Grinder, No. 6-A Bryant.
Lathe, 24x26 Greenlee, flat turret.
Miller, No. 2-H Becker vertical.
Pipe machine, 6" Merrill No. 64.

Press, Chicago scrap baler.
Press, No. 3 Manville, d. a.
Presses, No. 6 Manville, pillar, (3).
Presses, No. 6B Manville, pillar, (2).
Shear, No. 14 Pettingell, rotary.
Welders, No. 10-A Thomson vert. (7)

Ask for Complete List.

FOR SALE BY

Mid-West Machine Tool & Supply Co.,

Davenport, Iowa

High-Grade Production Equipment Priced to Sell.

Automatic, 1"-14" Cleveland.
Automatic, No. 2 Brown & Sharpe.
Drill, 1-S Garvin duplex.
Drills, 4-spindle 12"x14" L. & G.
Gear tooth rounder, 12" Ingle.
Grinder, No. 10 B. & S. plain.
Grinder, 6x32" Norton.
Hobbers, Nos. 3 & 12 B. & C.
Lathe, 20"x8" Cincinnati.
Miller, No. 13-B B. & S., production.

Planer, 36" Cleveland open side, side head.
Planer, D. & H., 10' between housing, 4 head, 25' table.
Planer, 60" Pond.
Radial, 4' American sensitive.
Radial, 4' Mueller.
Slotter, Niles 16".
Turret lathe, 24" Gisholt.
Turret lathe, No. 4 W. & S. univ.

Partial list; send us your inquiries.

FOR SALE BY

Syracuse Supply Company,

314 W. Fayette St., Syracuse, N. Y.

Guaranteed NEW MACHINES in original crates at prices below list:

Automatic, 24" Gridley, single spdl.
Crucible, FD-104 Hoskins.
Pipe machine, No. 70 Forbes.

Screw mchs., No. 4 W. & S., g.f.h., (3).
Straightener, No. 24 Corey.

Exceptional values in USED TOOLS:

Automatic, 18" model A., Cleveland.
Drill press, 25" W. F. & John Barnes.
Drill press, 4-spindle Barr sensitive.
Drill presses, 2-spindle Woodward & Rogers sensitive.
Grinder, 24" Safety Emery Wheel Co. snag grinder.
Lathe, 12"x5' Reed.
Lathe, 14"x6' Monarch.
Lathe, 16"x8' American, geared head, rebuilt.
Lathe, 16"x10' American.
Lathe, 8x60 Fitchburg lo-swing.
Miller, 34" Bilton automatic.
Millers, 3B plain Milwaukee.

Miller, No. 5 Becker vertical.
Miller, No. 4 LeBlond plain.
Planer, 30"x30"x16" L. W. Pond.
Planer, 60"x60"x22" Niles.
Radial, 8' Pond.
Tilted turret, No. 6 Wood.
Turret lathes, No. 4 Foster (2).
Turret lathe, No. 2 Warner & S., hollow hex.
Turret lathe, 24x26 Pratt & Whitney.
Turret lathe, No. 24 s. g. Garvin.
Turret lathes, 3x36 Jones & L. (3).
Turret lathe, 2x24 Jones & Lamson.
Turret lathe, 21" Gisholt.
Turret lathe, No. 3 Cincinnati-Acme.

USED AND REBUILT MACHINERY

FOR SALE BY

Botwinik Brothers, Inc., 67 Water St., New Haven, Conn.

FILING MACHINES.

25—Brand new Bench Type Filing Machines, 14" stroke, weight 22 lbs.

Price \$25.00 each, net, f. o. b. cars New Haven, Conn.

Wire, write or phone. Many other bargains.

FOR SALE BY

A. M. Steehr Machinery Co.,

560 W. Adams St., Chicago, Ill.

Boring mills, 20" Bullard; 60" & 12" Niles; all have 2 heads.

Brake, 8" Dreis & Krump, 14 gauge.

Compressors, 12 different sizes.

Drill presses, single spdl., L. & G.;

2-spindle H. & W.; 4-spdl. Foote-

Burt; 4-spdl. Barnes; 22" Rockford.

Engraving machines, 3 Gortons.

Furnaces, melting, for soft metal and aluminum.

Gear cutters, 72" Brown & Sharpe;

60" Gould & Eberhardt; 36" Fellows

gear shaper; and others.

Lathes, 18x8 Barnes, hvy. duty; 11"

Rockford; 15 and 24 spinning; and

others.

Punch presses, No. 16 Bliss horning;

No. 3 Walsh, o. b. i.; No. 34 Bliss;

arch, and others.

Oil extractors, centrifugal, (8).

Milling machines, plain & universal;

also No. 20 Van Norman, duplex.

Punch & shears, No. 3 Long & A.,

d. e., 4" thru 14" W., d. e.,

15" throat; No. 3 Long & A.; d. e.

Riveters, No. 4-A & No. 5-A High

Speed; No. 1 L. & A., 4" capacity;

No. 2 Grant rivet spinner & hammer

No. 8 Stimpson automatic, for split

rivets.

Saws, 9x9 Sterling high speed; 12"

band, and eight others.

Screw machines, Nos. 2 & 3 Foster,

(12); Nos. 52 & 53 Acme, others

plain and automatic.

Tapper, R. & S., 4" capacity.

Welders, both spot and butt.

Wire straightening machines, (5).

FOR SALE BY

Carlson Machinery Co.,

Davenport, Iowa

GRINDERS

6x32" Norton plain.

No. 65 Heald cylinder.

No. 2 Gardner disc.

No. 8 Besly disc.

No. 14 Besly disc.

No. 1 Cincinnati univ. tool & cutter.

No. 2 Oakley univ. tool & cutter.

Grand Rapids Yankee twist drill,

12" Marschke elec. grinder stand.

24" Norton snagging grinder.

LATHES

13"x5' Sheppard, geared hd., q. c.

14"x6' Hendey, geared head, q. c.,

taper attach., draw in attach.

14"x6' Hendey, yoke head, q. c.,

relieving attach., draw-in, attach.

15"x6' South Bend.

15"x6' Rockford semi q. c.

18"x6' Lodge & Shipley, q. c.

18"x6' American, taper attach., q. c.

No. 4 Warner & Swasey turret lathe.

GEAR CUTTING MACHINES.

No. 12 Barber-Colman.

24" Schuchardt & Schutte.

72"x20" Cincinnati.

DRILL PRESSES

16" Canedy-Otto, lever feed.

20" Silver, b. g.

21" Canedy-Otto, b. g., power feed.

21" Canedy-Otto, wheel & lever fd.

No. 24 Canedy-Otto, bench.

24" Hoefer 4-spindle.

4" Demco ball bearing, 7" overhang.

4" Sipp ball bearing, 8" overhang.

25" Snyder, sliding head, with tap-

ping attachment.

30" G. & E. sliding head.

36" New Haven, sliding head.

4" Hammond sensitive radial, with

tapping attachment.

MILLERS

No. 1 Van Norman hand.

No. 1 Rockford plain.

No. 14 Rockford plain.

No. 1 Cincinnati universal.

No. 2B Brown & Sharpe, s. p. d.

No. 34 Ohio plain, dividing head.

MISCELLANEOUS

Arbor press, No. 3 Greenerd.

Boring mche., No. 2 Rockford horiz.

Brake, 72" Peck, Stow & Wilcox.

Planer, 30x30x7 Fitchburg, 1 head.

Planer, 30x30x7 Detrick & H., o. s.

Press, No. 20 Swaine, o. b. i.

USED AND REBUILT MACHINERY

FOR SALE BY

United Mehry. & Supply Co., 4640 Newberry Ave., St. Louis, Mo.

Grinder, Heald shaper head rotary, with 12" magnetic chuck, like new \$	735.
Lathe, 14"x6" Carroll-Jamieson, quick change, fine	235.
Lathe, 52"x30" Fifield, triple geared, good shape	1,500.
Miller, plain, No. 1 1/2 American, quick change feeds	435.
Punch press, No. 2 Rockford inclinable, fine	190.
Rail drills, Moline, adjustable spindles, 1/2" capacity, (2), each	435.
Screw machine, No. 1 Warner & Swasey, good	145.
Shaper, 14" Smith & Mills heavy crank, fine	298.
Shaper, 16" Lodge & Davis crank, good	225.

FOR SALE BY

Cincinnati Machinery & Supply Co., 215 E. Pearl St., Cincinnati, O.

Machine Tools Worth Investigating.

Bolt threader, 1 1/2" Landis double spindle, lead screws.
Bolt threader, 1" Acme single spindle, class A, complete.
Boring mill, 24" Bullard, vertical rapid production.
Grinder, No. 2 Brown & Sharpe, surface.
Lathe, 30"x18" Monarch, q. c. g., d. b. g.—some machine.
Press, No. 3C Ferracute inclinable.
Press, No. 4 Verdin, K. & Verdin, geared inclinable.
Press, No. 66 Consolidated, geared, s. s.
Press, No. 91C Toledo, 6" stroke.
Press, 30-ton Lucas, forcing.
Radial drill, 7" American, late type.
Radial drill, 5" American.
Wheel press, 300-ton R. D. Wood, hydraulic.

Write for large Stock List.

FOR SALE BY

F. W. Burns Machinery Co., Sattley Bldg., Racine, Wis.

POWER PRESSES.

No. 165 Toledo toggle drawing, (3).	Nos. 4 and 5 Long & Allstatter, double end.
No. 164 1/2 Toledo toggle drawing.	No. 60 1/2 rack and pinion press.
No. 164 1/2 Toledo toggle drawing.	No. 65-A Consolidated, s.s., grd., (2).
No. 164 Toledo toggle drawing.	No. 20 Bliss, f. w. type.
No. 24-A Bliss toggle drawing.	No. 5 American can. f. w. type.
No. 14 Bliss toggle drawing, (3).	No. 30 Cameron arch press.
No. 64-A Consolidated, geared.	No. 14 Stoll, f. w. type.
No. 64-A Consolidated, f. w. type.	No. 5-A Toledo, f. w. type.
No. 83 Consolidated, adj. tbl., (5).	No. 10 Excelsior, 20" throat.
No. 51 Toledo arch presses, grd., (2).	
No. 35 Swaine, incl. f. w. type, (2).	

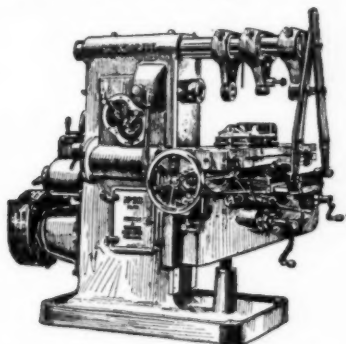
LATHES.

18"x 9" Hamilton, q. c.	24"x14" Lodge & Shipley, q. c.
16"x 8" Hamilton, q. c.	32"x32" Draper.
20"x10" Bradford, q. c.	9"x14" Porter-Cable.
18"x8" Lodge & Shipley pat. hd. q. c.	Prybil spinning lathes, (8).

MISCELLANEOUS.

Bolt threader, double, Acme 1 1/2"	Miller, No. 1 Garvin universal.
Bolt threader, double, Landis 2"	Miller, No. 34 Ohio plain.
Boring bar, universal 2 1/2"	Planer, Gorton No. 10-F 58"x56"x14"
Cleveland automatics, 2" and 2 1/2"	two heads on rail, two side heads, brand new.
Engraving mche., No. 1-A Gorton.	Riveting hammer, No. 6-B H. S. 4".
Grinder, No. 1 Diamond heavy duty, 24"x11" table.	Screw slotter, No. 3 Acme.
Grinder, No. 1 1/2 Landis universal, complete.	Shapers, 15" and 24" P. & J.
Hammer, drop, 1000 lb. Billings & Spencer.	Warner & Swasey, power feed (2).
	Welders, No. 10-D Agnew spot, brand new, (2).

Factory Rebuilt Milwaukee Milling Machines



We have left a few of these excellent investments in the styles listed below. Every machine has been completely disassembled, re-scraped, and new parts put in wherever necessary. A K & T rebuilt is thoroughly tested and carries the same accuracy guarantee as a new machine. The demand exceeds the supply. Better write at once.

No. 1½ BS Univ. Single Overarm

No. 2B Plain Single Overarm

No. 3B Plain Single Overarm

No. 4B Plain Double Overarm

No. 3B Vertical (Belt)

No. 3B Vertical (Motor-in-Base)

SUBJECT TO PRIOR SALE

Address: Rebuilding Department

MILWAUKEE MILLING MACHINES
KEARNEY & TRECKER
CORPORATION

5926 National Ave.,

Milwaukee, Wisconsin

WAIT A MINUTE! Look Over

This Little List of Big Buys. They're Excellent

Part of the Bath Iron Works Surplus Equipment

Niles 10'-16' Extension Boring Mill.
Sellers Floor Type, Heavy Duty Horizontal Boring, Drilling and Milling Machine.

Prentice 6' Standard Heavy Duty Motor Drive Plain Radial.

Niles Tool Works 120"x26' Planer, auxiliary side head housing, 2 swivel heads on cross rail and 2 side heads, all power feed.

Pond 72"x48"x16' Planer, two swivel heads on cross rail, one swivel side head, all power feeds.

Hilles & Jones No. 2 Horizontal Punch and Bender, motor drive.

3-Terry Locomotive Gantry Type Cranes, capacity 15 to 25 tons, 60' booms equipped with 3 G. E. mtrs., 230 volt, D. C. mounted on Steel runways, 1 270' long, 1 465' long.

Niles 84" Vertical Boring Mill, 89" max. swing, 2 swivel heads on cross rail.

GAP RIVETERS

Erie City 50-ton-single pressure hydraulic-solid steel frame-6' gap.

Morgan 100-ton-single pressure hydraulic-solid steel frame-10' 6" gap.

AIR COMPRESSOR

Chicago Pneumatic Belt Driven Air Compressor, Two Stage, capacity 1200 cu. ft., size 12x20x14, belted for 200 h. p.

Westinghouse 3 ph., 60 cy., 220 volt motor and starter.

DRILLING MACHINES

1-Warren 7'-Half Univ.-Radial Max. radius 88½"-72" travel of head-all feeds-extra box table.

LATHES

1-Putnam 50"x24' triple b. g. screw cutting.

1-Fitchburg, 42"x42' triple b.g. taper attachment.

1-Fitchburg 36"x23' grd. f. p. drive.

1-Fitchburg 30"x20' screw cutting.

2-Fitchburg 20"x12' screw cutting.

3-J. & L. 2x24", g. h., flat turret, fully equipped.

3-J. & L. 2x24", cone head, flat turret, fully equipped.

BORING MILLS

2-Bullard 42" vertical boring mills.

PUNCHES and SHEARS

1-Hilles & Jones No. 3 Comb. Punch and Shear, 48" throat.

2-Hilles & Jones No. 4 Comb. Punch and Shear, 48" throat.

1-Hilles & Jones No. 3 double angle thr.-cap. 6"x6"x1" steel angle bars.

1-Hilles & Jones No. 4 vertical single end punch and shear, 48" throat.

SLOTTING MACHINES

1-Betts 18" Extra Heavy Vertical Slotting Machines.

1-Betts 12" Extra Heavy Vertical Slotting Machine.

CRANES

1-Shaw 20-ton-3 motors-53' 4" span, 312' travel.

1-Shaw 5-ton-3 motors-51' 5" span, 312' travel.

1-Shaw 5-ton-3 motors-51' 5" span, 127' travel.

1-Shaw 5-ton-3 motors-42' span.

1-Shaw 5-ton-3 motors-50' span, mounted on steel runway.

1-Case 5-ton-3 mtrs.-51' 5" span, double bridge type.

1-Shepard 2½-ton Electric, 40' span, 85' travel.

1-Case 5-ton-3 motors-50' span, All above cranes fitted with G. E., 220 v., d. c. motors.

1-R. D. Wood 5-ton Hydraulic for riveter work.

1-Morgan 40-ton Hydraulic for riveter work.

OTHER EQUIPMENT AVAILABLE INCLUDES 600 and 1500 lb. Steam Hammers. Inside and Outside Cranes from 2 to 20 tons cap., various Woodworking Machines, 500 assorted Air Tools, Small Tools, Supplies, Office Furniture, etc.

MANHATTAN MACHINERY EXCHANGE

30 Church St.,

New York, N. Y.

And

JOSEPH BEAL & COMPANY

465 Atlantic Ave.,

Boston, Mass.

FOR SALE BY Cincinnati Automatic Machine Co.

Cincinnati, Ohio

ENGINE LATHES

- 9"x12" Porter Cable Lathe.
- 12"x 6' Willard 3-step cone D. B. G. Lathe.
- 15"x 6' Champion 3-step cone D. B. G. Lathe.
- 15"x 6' Greaves-Klusman S. B. G. Semi-Q. C. G. Lathe
- 16"x 6' Greaves-Klusman 4-step cone S. B. G. Semi-Q. C. G.
- 16"x 6' Cincinnati D. B. G., Q. C. G. Lathe.
- 16"x 8' Greaves-Klusman S. B. G. Semi-Q. C. G. Lathe.
- 16"x 8' American S. B. G. 3-step cone Q. C. G. Lathe.
- 16"x10' Bradford S. B. G. 3-step cone.
- 17"x 8' National D. B. G., Q. C. G. Lathe.
- 18"x 8' LeBlond 5-step cone S. B. G. Lathe.
- 18"x 8' L. & S. O. C., G. B. Lathe.
- 20"x 9' Chard D. B. G. 3-step cone Q. C. Lathe.
- 30"x12' Greaves-Klusman D. B. G., Q. C. G. Lathe.

TURRET LATHES

- 28" Gisholt Turret Lathe. 3-step cone.
- 24" Gisholt Std. Turret Lathe, 2-step cone.
- No. 2 Warner & Swasey Turret Lathe, bar equipment.
- 24"x26" Acme Flat Turret Lathe, cone head type, with bar equipment.
- 34"x36" Acme Flat Turret Lathe, chucking equipment.

AUTOMATIC SCREW MACHINES

- 3" Cincinnati 5 Spindle Automatic Screw Machine.
- 3" Cleveland Single Spindle Automatic Screw Machine.
- 24" Cleveland Automatic Screw Machine.
- No. 52-4" National Acme 4 Spindle Automatic Screw Machine.
- 44" Gridley Single Spindle Automatic Screw Machine.

PLANERS

- | | |
|-------------------------------------|-------------------------------------|
| 24x24x 6' Cincinnati Planer, 1 hd. | 48x48x14' Cincinnati Planer, 3 hds. |
| 30x30x 8' Ohio Planer, 1 head. | 48x48x28' Cincinnati Planer, 2 hds. |
| 36x36x10' Ohio Planer, 2 heads. | 60x60x12' Cincinnati Planer, 4 hds. |
| 42x36x21' Cincinnati Planer, 4 hds. | 60x48x16' Cincinnati Semi-HYPRO |
| 56x42x12' Cincinnati Planer, 3 hds. | Planer, 4 heads. |
| 56x42x24' Cincinnati Planer, 4 hds. | |

GRINDERS

- | | |
|------------------------------------|-----------------------------------|
| 6x32" Norton Plain Grinder. | No. 18 Bryant Chucking Grinder. |
| 7½x72" No. 16 B. & S. Pl. Grinder. | No. 75 Heald Internal Grinder. |
| 8x34" Modern Tool Co. Pl. Grinder. | No. 18 Bryant Internal Grinder. |
| 10x48" B. & S. Plain Grinder. | No. 2 Oakley Univ. Tool & Cutter. |

MILLING MACHINES

- No. 6 Whitney Hand Miller.
- No. 60 Brown & Sharpe Plain Milling Machine.
- No. 1½ American Plain Milling Machine.
- No. 6 Steptoe Milling Machine.
- No. 1 Cincinnati cone type Plain Milling Machine.
- No. 1½ Cincinnati Plain cone Driven Milling Machine.
- No. 2 Cincinnati Plain cone Driven Milling Machine.

GEAR CUTTERS

- 36" B. & S. Auto. Gear Cutter.
- No. 6 Fellows Gear Shaper.

DRILLING MACHINES

- 22" Barnes Upright Drill.
- 24" Wiegell Drill, D. B. G.
- 3' American Sensitive Radial Drill.

MISCELLANEOUS

- | | |
|-----------------------------------|-------------------------------|
| Webster & Perks Nut Tapper, 5-sp. | Brown & Sharpe Screw Slotter. |
| P. & W. Relieving McHe. and c. s. | No. 3 Marking Machine. |
| Arthur Colton Filing Machine. | Echograph and Transformer. |
| Universal Graduating Machine. | |

QUALITY Rebuilt and Offered by Eastern

Radials and Upright Drills

- | | |
|---|---|
| <p>7' American Tool Works triple geared plain radial, gear box drive.
7' Drees high duty plain radial, gear box drive.
5' Niles-Bement-Pond semi-universal, radial, gear box drive.
5' Reed-Prentice plain, gear box.
4' Bickford plain, gear box drive.
3' Mueller plain, gear box drive.
2½' American Tool Works triple geared plain, gear box drive.
3' American Tool Works high speed ball bearing, tapping attachment.
Nos. 1 & 3 W. F. & John Barnes horizontal radials.
28' Cincinnati-Bickford upright, gear box drive, tapping attachment.</p> | <p>28' Aurora upright drill.
26' Reed-Prentice upright drill, gear box drive, tapping attachment.
26' W. F. & John Barnes upright.
24' Cincinnati-Bickford gear box drive.
24' Cincinnati-Bickford, tapping atts.
24' Aurora upright drill.
22' Aurora upright tapping atts.
No. 614 Baker Bros. heavy duty.
No. 310 Baker Bros. heavy duty.
D-No. 3 Colburn hvy. duty, tapp g att.
Minster Jr. heavy duty drill.
3-Sp. No. 2 Avey, hi-sp. ball bearing.
6-spindle Henry & Wright high speed, ball bearing.
HENRY & WRIGHT CLASS "B"
hi.-sp. ball bearing, power feed.</p> |
|---|---|

Shapers and Planers

- | | |
|---|--|
| <p>24' Cincinnati heavy duty back geared crank shaper.
24' Queen City hvy. duty b.g. cr. shaper.
24' Smith & Mills heavy duty back geared crank shaper.
20' Cincinnati heavy duty back geared crank shaper.
20' Queen City heavy duty back geared crank shaper.</p> | <p>20' Hendey friction geared shaper, power down feed to head.
15' American Tool Works cr. shaper.
42"x42"x12' Grayplaner, 2 hds. on rail.
38"x38"x18' Niles Tool Works planer, 2 heads on rail.
30"x30"x8' G. A. Gray planer, one head on rail.</p> |
|---|--|

Grinders

- | | |
|--|--|
| <p>16' Heald rotary surf. magnetic chuck.
No. 2 Reed Bros., sur. magnetic chuck.
No. 1 Wilmarth & Morman surface.
No. 2, size 12"x36" Cincinnati plain.
8"x30" Modern plain, self-contained.
6"x32" Norton plain.
6"x15" Fitchburg plain.
No. 1 Brown & Sharpe universal.
No. 3 Brown & Sharpe universal.
No. 70 Heald internal.</p> | <p>No. 60 Heald cyl. gr., late type comp.
No. 2 Oakley universal tool & cutter.
No. 2 OHIO universal tool and cutter.
No. 1 LeBlond univ. tool and cutter.
No. 1 Wilmarth & Morman universal tool and cutter.
No. 3 Brown & Sharpe universal cutter and reamer.
Nos. 1 & 2 Gardner disc grinders.
No. 120 Gardner double disc.</p> |
|--|--|

EASTERN MACHINERY CO. 108

We also Buy machinery. 108

Guaranteed Machine Tools

Milling Machines

- No. 3 R. K. LeBlond universal, cone pulley, complete.
- No. 1½ Rockford universal cone pulley, complete.
- No. 1 Cincinnati universal, cone pulley, complete.
- No. 5 R. K. LeBlond heavy duty, plain, single pulley.
- No. 4 Cincinnati Plain, cone pulley.
- No. 3 Heavy Duty R. K. LeBlond plain, cone pulley.
- No. 3-B Heavy Brown & Sharpe plain, single pulley.
- No. 34 OHIO heavy duty plain, cone pulley, power quick return to table.
- No. 3 Cincinnati plain, cone pulley.
- No. 3 Kempsmith plain, cone pulley.
- No. 2 Cincinnati plain, cone pulley.
- No. 2 Kempsmith plain, cone pulley.
- No. 2 LeBlond plain, cone pulley.
- No. 1½ Valley City plain, cone pulley.
- No. 20 OHIO plain, cone pulley.
- No. 0 Cincinnati plain, cone pulley.
- No. 1½ B. MILWAUKEE VERTICAL, single pulley.
- No. 3 B. & S. vertical, single pulley.
- Nos. 5B & 5C Becker vert., cone pulley.
- No. 3 Becker vertical, cone pulley.
- No. 6 Whitney hand miller.
- Nos. 1 & 1½ Knight milling & drilling.
- Becker, Hendey and Carter & Hakes Lincoln type mfg. millers.

Engine Lathes

- 42" Pond, with raising blocks to swing 53" by 15' bed.
- 30"x17" Houston, Stanwood & Gamble heavy duty, quick change.
- 30"x12" LeBlond heavy duty, q. c.
- 24"x10" Boye & Emmes, quick change
- 21"x10" LeBlond heavy duty, quick change, late type.
- 20"x12" Hendey yoke head quick change, with taper attachment.
- 20"x10" United States heavy duty, quick change, 95% new.
- 20"x10" American Tool Works heavy duty, quick change, with taper att.
- 18"x14" LeBlond heavy duty, quick change, taper attachment.
- 18"x11" Chard hvy. duty, Semi-q. ch.
- 18"x12" South Bend standard change, with taper attachment.
- 18"x8" Lodge & Shipley, q. c.
- 18"x8" Mueller heavy duty, q. c.
- 18"x8" Rockford, q. c., taper att.
- 16"x8" R. K. LeBlond, quick change.
- 16"x8" Hendey yoke head q. c., with taper and collets.
- 16"x8" Sidney, q. c., with taper.
- 16"x6" Lodge & Shipley, quick chg.
- 16"x6" R. K. LeBlond, q. c.
- 16"x6" Rahn-Larmon heavy duty, quick change, taper attachment.
- 14"x6" Monarch, quick change.
- 12"x5" R. K. LeBlond, q. c.

Gear Cutters and Hobbers

- 60" No. 5-A Cincinnati, auto spur.
- 60" No. 5 Brown & Sharpe auto. spur.
- No. 4-48" Brown & S. auto spur.
- No. 3-26" Brown & S. auto spur.
- 24" Gould & Eberhardt auto. spur.
- No. 12 Brown & Sharpe auto. spur and bevel, cap. 12" gears.
- 18" Schuchardt & Schutte gear hobber.
- 18-H Gould & Eberhardt gear hobber.
- No. 12 Barber-Colman gear hobber.

(Continued on Next Page)

108 E. Pearl St., CINCINNATI, O.

What have you to Sell?

QUALITY Rebuilt and Guaranteed Machine Tools Offered by Eastern

Continued from Preceding Pages

Turret Lathes and Screw Machines

24" Gisholt turret, late type, 6 1/4" hole, taper attachment.
13" Gisholt turret lathe, taper att.
3"x36" Jones & Lamson turret No. 9 lathe, geared head.
2 1/2"x26" Pratt & Whitney turret lathe, geared head.
2 1/4"x26" Cinti. Acme flat tur. lathe.
2" Pratt & Whitney turret lathe.
No. 6 Warner & Swasey turret lathe.
No. 5 Foster turret lathe.

No. 4 Warner & Swasey turret lathe, No. 4 Bardons & Oliver turret lathe, power cross feed to cut-off slide.
No. 4 Millholland turret lathe.
No. 2 Foster turret lathe.
24"x10' LeBlond universal turret lathe.
21"x10' LeBlond mfg. lathe, 4-way turret tool post.
19"x8' LeBlond mfg. lathe, 4-way turret tool post.
Porter-Cable mfg. lathes.

Miscellaneous

Arbor Presses, Nos. 4 & 5, Greenerd.
Arbor press, No. 4 Atlas.
Bolt Cutter, 2" Acme class "A".
Bolt Cutter, 2" Acme class "A", with new 2" Landis die head.
Bolt Threading Machine, 1" Landis, with lead screw attachment.
Boring mill, vertical, 24" Bullard rapid production type.
Boring mills, vertical, 50" Niles Tool Works, 2 swivel heads on rail.
Brake, power, 8' Dries & Krump, 10 gauge capacity.
Broaching Machines, Nos. 2 & 3-B J. N. LaPointe.
Cold Saw, Nos. 1 & 4 Cochrane-Bly.
Electric Spot Welder, Toledo, cap. to weld 2 pieces 1/2" material.
Electric Spot Welder, Federal, cap. to weld 2 pieces 1/4" material.
Hack Saw, power, 6"x6" Racine hi-up.

Forcing presses, 15 & 20 ton Lucas Machine Tool Co.
Hack Saw, 8"x8" No. 7 Atkins Kwik Kut.
Hammer, 100 & 200 lb. Bliss board dr.
Hammer, 600 lb. Chambersburg steam.
Pipe Machine, 2" Williams, power.
Pipe Machine, 6" Merrill, power.
Press, horning, No. 41-A Toledo.
Presses, power, C No. 3 & C No. 5 Ferracute, o. b. i.
Press, power, No. 8 Chas. Leffer, o. b. i.
Riveting Hammer, No. 4A High Sp.
Riveting Machine, 5' 16" Grant.
Shear, power gap, square, 62" No. 56 Niagara, cap. 16 gauge.
Shear, power gap, square, 42" No. 242 Niagara, 14 gauge and lighter.
Shear, power square, 36" No. 239 D. H. Stoll, 14 gauge and lighter.
Tapping Mch., No. 2X Garvin auto.

And many others. Send for our complete list of bargains.

EASTERN MACHINERY CO.
408 E. Pearl St., CINCINNATI, O.

Lowest Prices!

and The World's Greatest Stock!

LATHES

48"x50" Amal. h. d. gun boring.
 48"x40" Pond triple geared.
 48"x16" Putnam h. d. production.
 36"x32" Bridgford grd. hd., q. c. g.
 30"x16" LeBlond h. d., q. c. g.
 24"x12" American, q. c. g.
 24"x 8" LeBlond, q. c. g.
 20"x10" Davis, q. c. g.

PLANERS

60"x60"x18" Pond 2-heads.
 48"x48"x20" N. B. P. 2-heads.
 48"x48"x 8" Sellers 1-head.
 36"x36"x21" Gray 2-heads.
 30"x30"x20" Wood. & Powell 2-hds.
 22"x22"x 5" Gray, 1-head.

SHAPERS

30" Norton.
 24" Steptoe.
 20" Smith & Mills.
 16" Stockbridge.

MILLERS

24"x24"x12" Ingersoll horiz. slab.
 No. 3 Brown & Sharpe vertical.
 No. 2 Brown & Sharpe universal.
 No. 5-C Becker vertical.
 No. 7-H Becker Lincoln type.
 No. 2½ Hendey Lincoln type.

RADIAL DRILLS

30" American, t. a.
 36" Gang.
 6" Dreses.
 4" Dreses.

GRINDERS

20"x54" Diamond wet surface.
 16"x68" Landis crankshaft.
 16"x66" Landis universal.
 16"x36" Landis universal.
 10"x48" Landis universal.
 12"x36" Fitchburg plain.

STEAM SHOVELS

95-Ton Bucyrus R. R. type.
 70-Ton Bucyrus R. R. type.

SLOTTERS

10" Putnam.
 16" Betts.
 20" Niles.

PUNCHES and SHEARS

48" Throat Cleveland 1" cap.
 42" Whiting 1" cap. arch. jaws.
 36" Thrt. Cleveland 1" cap. arch. jaws.
 18" Thrt. Cleveland ½" cap. arch. jaws.

PUNCH PRESSES

No. 55 D. G. G. Ferr. dbl. grd., 16" Str.
 No. E-57 Ferr. dbl. grd., 2½" Str.
 No. 75½ Bliss straight side, 6" Str.
 No. 6 American Can Co. style-N, o.b.i.
 No. 256 Toledo dbl. crank, s. s., 4" str.
 No. 58 Toledo s. s. trimming.
 No. 5 Crosby Stiles type, 2½" str.

MISCELLANEOUS

12" L. & A. style-A Forming Press.
 750-1000-1500 ton Mesta Presses.
 365-Ton Camden Jogging Press.
 5-Ton Whiting El. Crane, 35' span.
 10-Ton Morgan El. Crane, 73' span.
 19x24 American Mogul type, 63-ton.
 Standard Gauge Locomotive.
 16x24 Vulcan 50-ton Saddle Tank.
 6000 Lb. Chamb. D. F. Stm. Hammer.
 2500 Lb. Chamb. D. F. Stm. Hammer.
 2500 Lb. Bliss Board Drop Hammer.
 No. 4-B Wms. & White Bulldozer.
 2" Curtis Pipe Thread. Machine.
 6" Bignall & Keeler Pipe Th. Mche.
 Baush 8-Spindle Multiple Drill.
 Nos. 2, 3, 4 Wood Tilt. Tur. Lathes.
 7500 to 30000 gal. Oil Stor. Tanks.

*Machinery Bulletin No. 209, describing our
 complete stock, mailed free on request.*

HARRIS BROTHERS COMPANY
35th & Iron Sts., CHICAGO

Bath's Bargains

Boring Mills—Vertical

- 42" Bullard 2 swivel heads.
- 42" King, 2 swivel heads, rapid traverse.
- 44" Baush, 2 swivel heads.
- 42", 48" and 54" Colburn boring mills.
- 72" Pond, 2 swivel heads, heavy.
- 10' Betts, rebuilt and very good.

Boring Mills—Horizontal

- 3" bar Binsse, table type.
- 3" bar Lucas, table type.
- 3½" bar Rochester, floor type.
- 3½" bar Landis, floor type.
- 5" bar Beaman & Smith, floor type.
- 4" bar Morton floor type boring, drilling and slotting machine.

Drills

- 4-spindle 20" Barnes.
- 6-spindle Moline rail drill, 1½" capacity.
- 5' Bickford radial.
- No. 1, 8' wall radial.
- 20" Barnes, sliding head.
- 24" Cincinnati, sliding head, friction back gears.
- 28" Cincinnati, sliding head.
- 30" Aurora, sliding head.
- 32" Cincinnati, with tapping attachment.
- 24" No. 25 Foote-Burt, with compound table.

Forging Machines and Bulldozers

- 1", 1¼", 1½", 1¾", 2½" and 3" Ajax Upsetters.
- 1", 1¼" and 1½" Acme steel bed Upsetters.
- 4 & 5 Williams & White Bulldozers.
- 250-ton Mesta Steam Hydraulic, 85%.

Grinders

- 18x96" Norton plain.
- 17x36" Landis universal.
- No. 20 Safety electric floor grinder, 10 HP motor, 32"x4" wheels.
- Various electric floor grinders and grinding stands.

Hydraulic Equipment

- 175-ton R. D. Wood 4-column Flanging Press.
- 1800-ton Kilby Press, 34"x17".
- Morgan Hydraulic Riveter, 8' 6" gap.
- Wood and Bement-Miles Hydraulic Riveters, 10' 6" gap.

Lathes

- 14" to 20" tool room, various lengths.
- 25"x12" LeBlond heavy duty.
- 30"x14" Boye & Emmea, double back geared.
- 36"x14" Schumacher & Boye, triple geared.
- 48"x26" Bridgeford, grd. hd., t. a.
- 48"-60"x34" Houston, Stanwood & Gamble, grd. hd., mtr. dr.

Tumbling Barrels

- Several sets 18"x48" chill lined, square, with roller bearings and exhaust.

CYRIL J. BATH & CO., E. 70th Mac

For December

Milling Machines

Style "B" Gooley & Edlund, (2).
20"x7½"x18" Oesterlein plain, belt drive.
No. 1 Rockford plain, back geared.
No. 2 Brown & Sharpe vertical.
No. 2-B heavy Brown & Sharpe plain.
No. 3 Brown & Sharpe plain.
No. 3 Hendey, geared head, plain.
No. 4 Cincinnati high power miller.
Becker miller, model "C", table 14"x54".

Planers

22"x24"x57" Fitchburg, single head.
30"x30"x8" Gray, single head.
30"x30"x8" Cincinnati, single head.
48"x48"x18" Pond, 4 heads, heavy duty.
72"x72"x16" Betts, four heads.

Punches and Shears

No. 4 Doelger & Kirsten alligator shear, 4¾" cap., 30" blades.
84" throat, Long & Allstatter, capacity about ¾" thru ¾".
Kling Bros. horn press, 60" horn, flywheel 50" dia. 6½" face.
48" throat No. 4 Southwark, capacity 2"x1¼".
No. 6 Quickwork rotary shear, capacity up to 1¼" plate.
36" throat Lennox rotary shear, capacity about ½" plate.
15" throat No. 14 Williams & White.
No. 4-R United Engineering alligator shear, 12" blades, 3" cap.
No. 18 Carlin alligator shear, 2¾" capacity, 23" blades.
51" Bertach plate shear, ½" capacity.
76" Multiple punch, shear or press, ½" capacity.
4" Capacity Loyd-Booth cam driven alligator shear.

Turret Lathes and Screw Machines

3"x36" Jones & Lamson.
No. 3-A Warner & Swasey.
18" Libby, bar and chucking equipment.
No. 4 Bardons & Oliver.

Miscellaneous

Acetylene Generator.
Blower, No. 4 Root, motor drive.
Blowers, Nos. 1 & 2 Buffalo Forge.
Blower, No. 14 Root positive pressure.
Bolt cutter, Acme, 1" belt.
Chain Hoists, ½, 1, 1½, 4 & 6 ton.
Cold Saw, No. 4 Cochrane-Bly.
Cold Saw, 48" Newton.
Gear Cutter, 36" Gould & Eberhardt.
Grinder, No. 116 Cochrane-Bly.
Hammer, 100 lb. Bradley helve.
Pipe Machines, 2" & 4" Jarecki.
Press, No. 66 Consolidated, 4" stroke.
Press, C-1 Ferracute, 2" stroke.
Pyrometer, Brown.
Slotter, 48" Niles-Bement-Pond, motor drive.

Machinery Av., N. E., Cleveland, O.

Below, we list a few machines from our immense stock. We have hundreds more. All are high-grade, guaranteed and real

BARGAINS

LATHES

- 1-56"x44"x18' Johnston.
- 1-51"x20' LeBlond.
- 1-44"x18' Putnam.
- 4-36"x30' Pittsburgh Geared Hd.
- 2-30"x34"x12' L. & S. Sel. Hd.
- 1-28"x16' Bridgeford.
- 15-25"x12' LeBlond.
- 1-24"x15' Chard.
- 1-24"x12' Reed Prentice Grd. Hd.
- 9-24"x11' Cisco.
- 1-24"x10' American.
- 10-21"x10' LeBlond.
- 2-20"x16' American Grd. Hd.
- 2-20"x12' American Grd. Hd.
- 1-20"x10' Lodge & Shipley.
- 2-20"x 8' LeBlond.
- 1-16"x 8' Walcott.
- 1-16"x 8' Monarch.
- 6-16"x 8' Walcott.
- 4-14"x 6' Carroll-Jamieson.

MILLERS

- 1-No. 6 Becker Vertical.
- 1-No. 5-C Becker Vertical.
- 6-No. 3 Brown & Sharpe Vert.
- 1-No. 3 Cincinnati Vertical.
- 1-No. 2B Milwaukee Vertical.
- 2-No. 4-B Becker Vertical.
- 3-No. 4 LeBlond Plain.
- 4-No. 4 Cincinnati Plain.
- 3-No. 3-B Hvy. Brown & Sharpe.
- 8-No. 3 Kempsmith Plain.
- 2-No. 2-B Hvy. Brown & Sharpe.
- 1-No. 2 Kempsmith Plain.

PLANERS

- 1-72"x56"x36' Cincinnati.
- 1-60"x48"x30' Hamilton.
- 3-36"x36"x18' Cincinnati.
- 1-36"x36"x12' Woodward & P.
- 1-36"x36"x12' Gray.
- 1-30"x30"x14' N. B. P.
- 1-24"x24"x 6' Hamilton.

PRESSES

- 1-96-G Toledo Double Crank.
- 2-No. 56 Ferracute.
- 1-No. 163 Toledo Toggie.

BORING MILLS—Vertical

- 5-72" Gisholt.
- 1-72" Cincinnati.
- 1-72" Colburn.
- 1-42" Colburn.
- 1-30" Bullard.
- 1-24" Bullard Rapid Production.

BORING MILLS—Horizontal

- 1-No. 35 Landis.
- 1-No. 1½ Giddings & Lewis.
- 7-2" Bar Rockford.

DRILL PRESSES

- 1-No. 513 Baker.
- 1-No. 310 Baker.
- 1-No. 24 Foote-Burt.
- 1-24" Colburn.
- 1-22" Barnes all geared.
- 14-No. 1-K 8" Henry & Wright.

SLAB MILLERS.

- 7-22"x24"x12' Ingersoll.
- 1-24"x24"x 8' Ingersoll.
- 1-24"x12"x20' Ingersoll.
- 1-32"x32"x12' Ingersoll.

GRINDERS

- 4-22" P. & W. Vert. Surf.
- 1-20"x96" Landis.
- 1-18"x30"x96" Norton Gap.
- 3-14"x50" Norton.
- 3-10"x72" Norton.
- 6-6"x32" Norton.
- 2-No. 70 Heald.

Our Guarantee: Your money back if you return a machine within thirty days, freight prepaid.

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SIMMONS *New and Used* MACHINE TOOLS

ATTRACTIVE PRICES

MONEY BACK GUARANTEE

TESTED BEFORE SHIPMENT

Shapers and Slotters

- 1-32" Smith Mills Shaper.
- 1-28" Queen City Shaper.
- 2-24" Cincinnati, cone.
- 1-24" Gould & Eberhardt, cone.
- 1-20" Ohio Shaper.
- 1-20" Kelly b. g., cone.
- 1-20" Smith Mills, b. g.
- 1-16" American, motor drive.
- 1-16" Smith Mills, cone.
- 1-15" Potter-Johnston Shaper.
- 2-36" Industrial Slotters.
- 1-36" Bement Slotter.
- 2-24" Bement Slotters.
- 2-6" Pratt & W. Vertical shapers.
- 1-15" Newton Slotter.

Automatics

- 10-24, 34 & 44 Gridley, single spindle, motor drive.
- 1-7" Cleveland, single spindle.
- 2-24" Cleveland, single spindle.
- 1-24" Cleveland, single spindle.
- 2-00 B. & S. Turret Forming.
- 4-0 B. & S. Automatics.
- 1-0 B. & S. Cut-off.
- 1-14" x 1" New Britain.

Planers

- 1-72" x 72" x 18' Detrick-Harvey Latest Type Openside, 3-heads, motor drive.
- 1-60" x 60" x 26' D. & H. Open-side.
- 1-60" x 60" x 14' Powell heavy.
- 1-60" x 60" x 12' Gleason.
- 1-42" x 42" x 26' Pond Planer four heads, rev. m. d.
- 1-36" x 36" x 20' Woodward-Powell, like new, reversing motor drive.
- 1-36" x 36" x 14' N.-B.-P. gear box, 2 heads, belt or m. d.
- 1-30" x 30" x 18' Cincinnati.
- 1-24" x 24" x 12' American, 2 heads.
- 6-24" x 24" x 6' 8' and 10' Whitcomb Second Belt Drive Planers.

Turret Lathes

- 3-24" Gisholt, big bore.
- 2-54" Bardons & Oliver.
- 1-24" Garvin, g. f. h.
- 3-24" x 11" Acme, g. f. h.
- 1-No. 3-A Warner & Swasey tur.
- 6-3x36 Jones & Lamson flat.
- 1-3x36 Hartness, double spindle.
- 6-18" Libby rapid production.
- 2-24" x 10" Millholland.
- 7/16" x 24" P. & W. turret.
- 8-2" x 26" P. & W. turret.

Vertical Boring Mills

- 2-24" Bullard R. P., side head.
- 1-30" Gisholt vertical turret.
- 1-34" Bertram (Niles) turret.
- 1-36" Vertical turret and side.
- 2-42" Bullard, two heads.
- 1-64" Colburn, two heads.
- 1-60" Cincinnati, two swivel hds.
- 1-62" King vertical.
- 1-72" King vertical.
- 1-72" Niles, two swivel heads.
- 1-84" Pond special X heavy, two swivel heads, gear feeds.
- 1-4" Bar Niles Horizontal Mill.

Miscellaneous

- 1-54" Morgan Hot Saw.
- 1-3 Ton Wellman-Seaver-Morgan, Ingto Manipulator.
- 1-C-5 Ferracute Press.
- 10-Henry-Wright 4-spindle Drills.
- XB-2 Ingersoll-Rand Compressor
- 2-B Gorton Cut-off Machine.
- LaPointe Broaching Machines.
- 8" Bignall Keeler Pipe.
- Rockford Balancing and Drilling.
- Hilles-Jones Guillotine Shear.
- 5x5 Carlin Alligator Shear.
- No. 0 Eastman Photostat.
- 40 lb. Bradley Helve.
- 1000 lb. McDougal Porter single leg forging.
- 4-Nutter Barnes Cut-off Saws.

Simmons Machine Tool Corp.

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149 Broadway

1212 Troy Road

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LOOK THESE OVER! - R

SHAPERS AND PLANERS

20" Smith & Mills, back geared, s. p. d., new	\$ 825.
18" Hollingsworth, heavy-duty, back geared, new	590.
16" American, back geared, good condition	400.
16" Queen City, back geared, good condition	450.
16" Smith & Mills, back geared, good condition	345.
6x6 Pratt & Whitney, good condition	115.
32x32x14" Pond Planer, 2 heads on rail, good condition ..	985.
24x24x6" Pease Planer, good condition	290.
24x24x6" Gray Planer, good condition	350.
32x32x8" Woodward & Powell Planer, good condition ..	490.

LATHES

42x12 Gleason, face plate drive, 36" chuck, heavy-duty ..	\$ 685.
24x12 Boye & Emmes, loose change gears, ex. cond.	390.
24x12 Bradford, loose change gears, taper attach. ex. cond.	335.
22x12 Draper, back geared, no grs., otherwise ex. cond. ..	150.
18x12 Hendey, quick change gears, taper att. good cond.	485.
21x8 LeBlond heavy-duty, single pulley drive, q. c. grs. ..	790.
16x6 Rockford, loose change gears, good condition	165.
14x6 Monarch, quick change gears, good condition	195.
14x6 LeBlonds, back geared, quick change gears, all in excellent condition and with complete equipment; just the thing for repair shops	\$250. to \$325.
12x6 Reed, without gears, otherwise in good condition ..	50.

MISCELLANEOUS

No. 0 Mitts & Merrill Keyseater good condition	\$ 95.
No. 1½ B. & S. Universal Miller, complete equip., new ..	985.
No. 4 LeBlond plain Miller, vertical head, extra table 16x86"; good condition	895.
No. 3 Cincinnati Miller, vertical, single pulley drive	795.
No. 2 Cleveland Miller, plain, single pulley drive, like new	745.
36" American Band Saw, 32x32 table, excellent cond.	125.

A. R. Marsh Machinery Company, 19

For our financial responsibility—See

! Real December Bargains!

Norton Draw-Cut Shaper, good condition.....	\$ 385.
38" Wright Metal Cutting Band Saw, like new.....	180.
250 lb. Beaudry Hammer, good condition.....	175.
5' Keufel & Esser Automatic Blue Print Machine, with motor, excellent condition.....	270.
4' Higley Cold Saw in good working order.....	85.
6x6 Burke Cold Saw, good condition.....	125.
No. 19 Chas. Leffler Press, o. b. i., like No. 19 Bliss.....	185.
No. 4½ Niagara Press, o. b. i., same as No. 20 Bliss.....	270.
No. 30 Perkins Press, o. b. i., like No. 18 Bliss.....	115.
No. 41 Toledo Horning Press, good condition.....	145.
8" Heald Circular Grinder, good condition.....	175.
16x48 Landis Crankshaft Grinder, latest type, like new.....	1250.
14x36 Pratt & Whitney Vertical Surface Grinder, ex. cond.....	495.
No. 1 Norton Tool and Cutter Grinder, new.....	285.
No. 14 Brown & Sharpe Plain Grinder, 12x48.....	470.
3¼x36 Cincinnati Acme Turret Lathe, like new.....	465.
3x36 J. & L., latest type, geared feed, excellent cond.....	330.
3x36 J. & L., latest type, 2 spindle, excellent condition.....	550.
No. 4 Bardons & Oliver Hand Screw Mche. ex. cond.....	350.
No. 24 New Britain Automatic, 5 spindle, ex. cond.....	950.
36" Reed-Prentice Drill, tapping attachment, new.....	495.
25" Snyder Drill, power feed, back gears, sliding head.....	215.
4 Sp. Allen Drill, ball bearing, new.....	565.
8 Sp. multiple, heavy-duty Fox Drill, good condition.....	565.
16" Henry & Wright high speed Drill, ball bearing, good cond.....	140.
No. 2 Pratt & Whitney Die Sinker, good condition.....	175.
No. 55 Atlas Power Driven Arbor Press, good cond.....	185.
20 H. P. Motor, a. c., 220 volt, 60 cycle, complete with starter, rails and pulley.....	190.
2 Sp. ¾" Acme Bolt Cutter with lead screws, like new.....	370.

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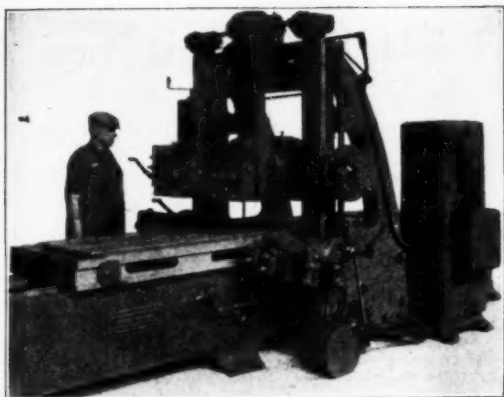
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See Bradstreet's September issue

Here's Your Opportunity To Secure Real Values—

- 1 24" Weigel Drill Press.
- 3 Fellows Gear Shapers.
- 3 No. 6 Foster Screw Machines.
- 2 No. 4 Southworth Screw Machines.
- 1 No. 4 J. N. LaPointe Broach and Extension.
- 1 No. 3 Landis Universal Grinder 16x36.
- 1 14x50 Norton Plain Grinder.
- 1 12x96 Landis Plain Grinder.
- 1 26"x26"x8' E. C. Pease Planer.
- 1 6' Niles Radial Drill.
- 1 Webster & Perks Universal Grinder.
- 1 10½ Bardons & Oliver Turret Lathe.
- 1 Bryant Internal Grinder.
- 2 6" Gleason Generators.
- 1 No. 2 Warner & Swasey Hand Screw Machine.
- 2 No. 2 Leisy Patton Hand Screw Machines.
- 1 No. 2 LaPointe Broach, 2-spindle.
- 1 American High Pressure Blower.
- 1 6x15 Fitchburg Grinder.
- 1 Tilted Metal Cutting Band Saw.
- 1 3" National Bolt Cutter.
- 1 4" Acme Bolt Cutter, 4½" capacity.
- 1 Warner & Swasey Knee Type Boring Mill.
- 1 20"x14' F. E. Reed Screw Cutting Engine Lathe.
- 1 S. W. Putnam (Fitchburg) 44"x45' triple gear Engine Lathe, 11 H. P. motor.
- 1 Cordesman Iron Tilting Top Saw Table.
- 1 12" Cincinnati Manufacturing Miller.
- 1 3½x84 Fitchburg Lo-swing Lathe.
- 1 Curtis Oil Separator and Hoist.
- 3 32"x12' Pittsburgh Screw Cutting Engine Lathes.
- 1 14"x6' Hendey Lathe.
- 1 18" Cincinnati Miller, 95% new.
- 1 Cincinnati Tool and Cutter Grinder.

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Niles-Bement-Pond heavy types, with complete electric reversing drive and four heads, new or slightly used, at bargain prices.

36"x36"x14'

36"x36"x16' NEW

36"x36"x26' NEW

42"x42"x26'

42"x42"x30'

48"x48"x16'

50"x36"x22' heavy widened type.

LATHE, Niles-Bement-Pond **NEW** 36"x16', triple geared.

MILLERS, No. 3 Heavy and No. 2 Heavy Brown & Sharpe, motor drive.

GEAR CUTTERS, two No. 4 Brown & Sharpe.

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Reliable Tools at Right Prices

BLISS No. 1½ Toggle Drawing Press.
 BLISS No. 2 Double Crank Press, Flywheel.
 BLISS No. 2-W Wiring and Bulging Press.
 BLISS No. 14-B Toggle Drawing Press.
 BLISS No. 20 Inclinal Flywheel Press.
 BLISS No. 27 Knuckle Joint 1000-ton Press.
 BLISS No. 24 Knuckle Joint 400-ton Press.
 BLISS No. 31 Overhanging Flywheel Press.
 BLISS No. 61 Flywheel Press, wgt. 2000 lbs.
 BLISS Stiles No. 3 Geared Press.
 BLISS No. 73½ Straight Side Geared Press.
 BLISS No. 77½ Straight Side Geared Press.
 STOLL No. 68 Straight Side Geared Press.
 TOLEDO No. 54 Geared Straight Side Press.
 TOLEDO No. 55½ Straight Side Trimming Press.
 TOLEDO Nos. 164½ & 165½ Toggle Drawing Presses.
 TOLEDO No. 167 Toggle Drawing Press.
 TOLEDO No. 168¾ Toggle Drawing Press.
 TOLEDO No. 666 Knuckle Joint 1000-ton Press.
 CONSOLIDATED No. 56 Flywheel Trimming Press.
 CONSOLIDATED No. 65 Geared Straight Side Press.
 CONSOLIDATED Nos. 93 and 94 Punching Presses.
 CONSOLIDATED No. 165 Flywheel Double Crank.
 FERRACUTE EG-6 Geared Straight Side Press.
 FERRACUTE D-66 Straight Side Reducing Press.
 NIAGARA No. 3 Inclinal Flywheel Press.
 WILLIAMS & WHITE Nos. 2, 4, & 6 Bulldozers.
 LUCAS 30-ton Power Forcing Arbor Press.
 ZEH & HAHNEMANN Nos. 12 & 20 Percussion Presses.
 NAZEL Nos. 2-B and 5-B Air Hammers.
 BEAUDRY 50 & 200 lb. Power Hammers.
 GARVIN No. 2-B. G. Automatic Tapping Machine.
 LANDIS 1" Double Head Bolt Cutters.
 LANDIS 1½" and 2" Single Head Bolt Cutters.
 HIGH SPEED Riveting Hammers, 3-A, 4-A, 5-A and 6-B.
 HILLES & JONES No. 2 Alligator Shear, 2¼" cap.
 HILLES & JONES No. 6½ Gate Shear, Cap. 1", 144" Blades.
 MORGAN No. 294 Gate Shear. Cap. ¾", 132" Blades.
 NIAGARA No. 642 Power Shear, 42" Blades, 10 Ga.
 PLATE Shear 72" Blds, Cap., ¾", 12" Thr. Wgt. 40,000 Lbs.
 CANTON No. 5 Alligator Shear, 3" cap.
 BELOIT 50" & 62" Bending Rolls, Cap. ½".
 CLEVELAND Pyramid Type Bending Rolls 9"x¾" Cap.
 CLEVELAND Pyramid Type Bending Rolls 10"x¾" Cap.
 CINCINNATI-ACME 3¼"x36" Flat Turret Lathes.
 SCHUMACHER & BOYE 24"x10" Lathe, Q. C. G.
 WICKES 36"x20" Lathe, q. c. g., s. p., motor drive.
 CLEVELAND ½" Model "B" & "G" Automatics.
 GRIDLEY ¾" & ⅝" Multiple Spindle Automatics.
 POWELL 36"x36"x12" PLANER
 CLEVELAND Punch Style "C", 42" Thr., Cap. 2" Thru 1".
 STOCKBRIDGE 20" Motor Driven Shaper.
 WINFIELD Spot Welder, capacity 2 pieces 3/16".

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LATHES

- 18"x 8' Morris Q. C., New, \$750.
- 18"x 10' Morris Q. C., New.
- 22"x 10' Morris Geared Head, New.
- 22"x 12' Morris Q. C., New.
- 32"x 17' Pond Single B. G., Cone.
- 42"x 16' Niles, T. G., Cone.

SHAPERS & SLOTTERS

- 16" S. G. Stockbridge, New, \$400.
- 16" B. G. Stockbridge, New, \$600.
- 26" Bement Dbl. Traveling Hd., Mtr.
- 15" Bement Slotter 220 v., D. C.

RADIALS

- 5' Niles Universal Gear Box.
- 5' Niles Semi-Universal Gear Box.
- 5' N. B. P. Univ., "Right Line," 220 v., D. C.
- 6' Niles Semi-Universal Gear Box.
- 6' Niles Full Universal Gear Box.
- 6' Niles Universal, Motor.

BORING MACHINES

- 60" - 4" Bar, Niles Horiz. B. & D.
- 5" Bar Niles Floor Borer.
- 18" P. & W. Side Head Mill.
- 42" Niles B. & T. Mill.
- 44" Niles, with R. H. Turret Head, 220 v., D. C.

PLANERS

- 30"x 30"x 8' Niles-B.-P., 2 Heads, Rev. Motor.
- 32"x 32"x 10' Niles, 2 Heads.
- 32"x 32"x 12' Pond, 2 Heads, Motor.
- 36"x 36"x 10' Niles, 4 Heads.
- 38"x 38"x 12' Niles, 2 Heads.
- 38"x 38"x 16' Niles, 3 Heads.
- 42"x 42"x 12' Niles, 4 Heads.
- 42"x 42"x 14' Pond, 4 Heads, Motor.
- 48"x 48"x 16' Pond, 4 Heads.
- 48"x 48"x 20' Pond, 4 Heads, M. D.
- 96"x 72"x 42' N-B-P Rev. Motor.
- 10"x 10"x 36' Betts, Motor, 4 Heads.

PUNCHES & SHEARS, AND MISCELLANEOUS EQUIPMENT

- 3/4" Cap. L. & A. Plate Shear, Motor.
- 1" x 1" Cap. 48" L. & A. Punch and Shear, Motor.
- 7/8" x 7/8" Cap. 12" Throat L. & A. Horizontal Punch.
- 185 lb. Motor Driven Air Hammer.
- 800 lbs. Bement Sgl. Frame Hammer.
- 800 lbs. Bement Board Drop.
- No. 2 Mitts & Merrill Keyseater.
- 48" B. & S. Spur Gear Cutter.
- 2" Cox Lever Grip Pipe Machine, D. C. Motor.
- DA2-Wilson, 220 v., D. C. Welder.

The Niles Tool Works Company

Division Niles-Bement-Pond Company

Hamilton, Ohio

New York, 111 Broadway.
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Boston, 175 Battery-march St.
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MOTCH AND THE MERRYWEATHER MACHINERY CO CLEVELAND DETROIT CINCINNATI PITTSBURGH

Machines of Quality

BORING MILLS

- No. 0 Giddings & Lewis Horizontal.
- 34" Bullard Vertical Turret Lathe (New Era).
- 36" Bullard Vertical Turret Lathe (New Era).
- 51" Bullard Standard Boring and Turning Mill.
- 61" Bullard Maxi Mill.

TURRET LATHES

- 14" Fay Automatic.
- No. 4 Warner & Swasey.
- No. 6 Warner & Swasey.
- 1 1/2" x 9" Cincinnati Acme.

MILLING MACHINES

- No. 2 B. & S. Univ. comp. equip.
- No. 1 Cincinnati Plain.
- No. 1M Cincinnati Plain (single pulley drive).
- No. 1B B. & S. (spl. pulley drive.)
- No. 4 Cincinnati Univ., index hd.
- No. 4 Cincinnati Pl. High-Power Rapid Traverse.

DRILL PRESSES

- 4-spindle Leland-Gifford.
- 4-spindle Edlund.
- 28" Cincinnati Bickford, sl. head.
- 36" American High-Speed Sensitive Radial.
- 51" Cincinnati Bickford Radial.

GEAR CUTTERS

- 18" Gould & E. Gear Hobbers.
- 36-S G. & E. Spur Gear Cutters.
- 6" Gleason Bevel Gear Generator.
- 11" Gleason Bevel Gear Generator.

SHAPERS

- 16" Cincinnati Back Geared.
- 16" Gould & E. Back Geared.
- 24" American Back Geared.
- 28" American Back Geared.

LATHES

- 12x5 Hendey tool room, q. c. f.
- 14x6 LeBlond, q. c. f.
- 14x6 Monarch, q. c. f.
- 14x8 Lodge & Shipley, q. c. f.
- 16x8 LeBlond, taper att.
- 20x10 American.
- 20x10 American Geared Hd.
- 20x14 Hendey.
- 24x12 American.
- 42x32 American, triple geared head, 2 carriages, motor drive, 34 h. p. motor.

GRINDERS

- No. 14 Pratt & Whitney surface grinder, vertical.
- 84" Diamond Face Grinder.
- No. 2 Norton Cutter Grinder, Full Univ. Equip. (power feed.)
- No. 1 LeBlond Cutter Grinder.
- No. 22 Heald Rotary Surface Grinders, (8" magnetic chuck).
- No. 255 Heald Rotary Surface Grinders, (8" magnetic chuck).
- No. 70 Heald Internal Grinder.
- No. 2 B. & S. Surface Grinders.

This is a partial list of our equipment. In addition to above list we have several hundred machines going through the process of rebuilding.

Let us send you one of our circulars describing our methods, listing our stock and picturing our plant.

Upon receipt of your address we will forward these circulars periodically.

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BORING MILLS: 30" Bullard Vertical..... \$200.
42" Bullard Vertical..... 600.
42" Bullard Vertical..... 850.
Niles Horizontal Boring, Drilling and Milling
Machine, 5" dia. bar.

DRILLS: 12" Allen Ball Bearing Sensitive..... \$150.
24" Weigel B. G..... 350.
6' Drees Universal Radial.

LATHES: 24"x16½" Johnson, solid spindle..... \$275.
26"x10½" Walcott Hvy. Duty Q.C.G., 3, ea. 650.
33"x13" New Haven.
24"x6" Gisholt Turret, 6¼" hol. spdl. 850.

MILLING MCHES.: No. 5 Brown & Sharpe Plain..... \$675.

PRESSES: Equal to No. 4 Stiles,
Double Acting Drawing, 2½" stroke..... \$125.

PUNCH & SHEAR: Canedy-Otto, hand power, ½"x½"..... \$ 45.
Cleveland Style "C", 24" throat, cap. 1" thru
½", with motor..... 800.

HAMMERS: No. 2-B Nazel, capacity 4" square.
2000 lb. Bement Steam Drop..... \$475.

SHAPERS: 14" Lodge & Davis S. G. \$150.
20" Cincinnati B. G. Crank..... 375.
24" Gould & Eberhardt B. G. Crank..... 400.
28" Ohio Double Geared..... 300.

MISCELLANEOUS: Air Compressor, Chicago 12x14, cap. 275 cu. ft. \$500.
Crane, Panama Portable, 2½-ton..... 60.
Forming Plate 3"x6"x4½" thick.
Motor, 10 h. p. Wagner, 3-60-220..... 100.
Planer, 36"x36"x10" Wilson, 2 hds.....
Planer, Cincinnati 42"x36"x12", 2 heads.
Planer, Detrick & H. Openside 96"x72"x26".
Riveters, Allen Portable Pneumatic 12" reach... 400.
Saw, Glem Cold, 22" dia., cap. 6" round..... 100.

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A Big Shear Bargain—

No. 40-C Williams-White Bar and Billet Shear,
with 20 H. P., 220 v., 60 cycle, 3-phase
motor. Weight 40,000 lbs.

OTHER SELECTIONS—from our stock

15" Dill Slotter, belt drive.
No. 204-A Toledo geared dbl. crank press.
No. 93 Consolidated solid back Press.
42" American Radial, single pulley drive.
36" Cincinnati Bickford Radial, sgl. pulley dr.
No. 3 Pratt & Whitney Die Sinker.
16"x96" Landis Plain Grinder.
No. 6 Becker Vertical Miller.
No. 3½ Pratt & Whitney Duplex Miller.
No. 0 Mitts & Merrill Keyseater.
No. 6 Foster Friction B. G. Turret Lathes.
24" Gisholt Turret Lathe, 6¼" bore.
80 lb. Bradley Helve Hammer.
36" Niles vertical boring mill, 2 heads.
3½" and 4" Acme Bolt Cutters.
4" Saunders Pipe Machine.

20 Lathes, 14" to 38" swing; Drills
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12"x 5' Cleveland, geared head.
14"x 6' Carroll-Jamieson, new, q. c.
14"x 6' Hamilton, grd. hd., motor dr.
14"x 6' Monarch, quick change.
14"x 6' Sebastian, c. r., h. d., mtr. dr.
14"x 8' Sidney, double back geared.
14"x 6' Hamilton, style B.
16"x 8' Sidney, double back geared.

18"x 10' American, quick change.
20"x 8' American, geared head.
20"x 10' Hamilton, rapid production.
22"x 10' Greaves & Klusman.
24"x 12' Bradford.
24"x 24' Prentice, with raising block.
8x60" & 3 1/2 x 60" Fitchburg, Lo-Swing.

TURRET LATHES and SCREW MACHINES

No. 4 Defiance, 1 1/2" capacity.
1 1/2" capacity Smurr & Kamen.
1 1/2" Milholland.
2x24 and 3x36 J. & L.

No. 1 Foster, 15/16" capacity, (2).
Warner & Swasey No. 2.
Warner & Swasey No. 4.

SHAPERS

14" Niles, traveling head.
14" Steptoe, crank.
16" American tool room.
16" O. & S., back geared, new, low price.

16" American back geared crank.
16" Cincinnati b. g., motor drive.
16" Barker back geared crank.
24" O. & S. back geared crank.
24" Gould & Eberhardt b. g. crank.

PRESSES

No. 10 and No. 15 Excelsior, foot.
No. 6-A Willard.
Nos. 3-A & 5-A Willard inclinable.

Nos. 1 1/2, 2, 2 1/2 & 4 Robinson, new.
Emco, bench, for radio parts.
Perkins, dbl. housing, wt. 4,000 lbs.

DRILLS and RADIALS

3' W. E. Gang plain.
No. 1 Baush multiple.
4' Plain Universal Radial Drill Co.
Electric Drills, Black & Decker.
No. 4 Duntley electric.

22", 24", 26", 28" and 32", sliding hd.
6" Ceiling Drill.
4-spindle Reed sensitive.
44" Stover.

MILLING MACHINES

No. 1 Kemp Smith universal, new.
No. 2 Kemp Smith plain.
No. 3 Kemp Smith plain, new.
No. 3 Cincinnati universal.
No. 3 1/2 Fox.

No. 25 Becker plain, power feed.
No. 2 H Brown & Sharpe plain.
Oesterlein 24x7 1/2 x 18 plain.
Briggs "A" high duty, 24x8" table.
No. 7 Becker, Lincoln type.

GRINDERS

Nos. 1 & 78 W. & M. surface.
6"x 15" Fitchburg plain.
10"x 36" Landis plain cylindrical.
12"x 36" Cincinnati universal.
16"x 42" Landis universal.
36" and 66" Yates plate.
No. 70 Heald internal.

No. 60 Heald cylinder.
Schmitt cylinder grinder.
No. 3 Ohio universal, tool and cut.
No. 4 Gardner 20" double disc.
No. 10 Besly 18" double disc.
No. 20 Bryant, chucking.
Capital internal, new, 2"x 2" cap.

MISCELLANEOUS

Band saw, Clark, compound.
Band saws, Napier 4"x 4", 10"x 10".
Bending rolls, 7" for 3" plate.
Blower, positive pressure, Leiman style "F".
Boring mill, Colburn No. 3, tur. hd.
Boring mill, 50" car wheel.
Brake, 10", 18-gauge metal.
Broaching mchs., 1 and 3 LaPointe.
Compressors, 6x8, 8x8 and 9x8.
Drawing tables, adjust., 42"x 6' top.
Gear cutter, No. 3-26 B. & S.
Gear miller, Bilton No. 1.
Hammer, No. 1 Pettingell.

Hammer, 150 lb. Standard drop.
Pipe machines, 2", 4" & 6".
Pumps, Gould triplex, 6 1/2 x 8".
Punch & shear, 1 1/2 x 10" throat.
Riveting hammers, High Speed
Nos. 2, 3, 4 & 5-A.
Scale, 1500 lb. Toledo, dial type.
Scleroscope, Shore type C.
Shear, 60" Peck, Stow & W., 18 ga.
Shear, No. 362 Robinson.
Shear, No. 20 Quickwork, 30" throat.
Shear, circular, Pettingell, 60" thrt.
Tapping machine, Acme 6-spindle.
Threading mche., W. & P. 2-spindle.

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COLUMBUS OHIO

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Peninsular Machinery Company

Machinery Dealers

DRILLING MACHINES

- 1—3 Spindle Henry & Wright Ball Bearing Sensitive, 12" over-hang, surface of table 40"x24".
- 1—28" Barnes Sliding Head Back Gear Power Feed Tapping Attachment, with compound table.
- 1—No. 3 Baush High Speed Multiple 20"x40" hor. hd., 10 spindles.
- 1—26" Kern Sliding Hd. Back Gear Power Fd. Tapping Attachment, cap. 24" hole, tapping capacity 24" pipe tap, (New).

GRINDERS

- 2—No. 11 Lumsden Ball Bearing Cup Wheel for grinding lathe Tools, (New).
- 1—No. 190 Greenfield Univ. Cutter and reamer Grinder, 8" swing, 16" centers.
- 1—No. 5 Oliver Motor Driven Twist Drill, capacity 1/2 to 2 1/2.
- 1—Cincinnati Cutter and Reamer.
- 1—No. 12 Gardner Disc.
- 1—No. 23B Valley City Dbl. End Disc, 24" steel discs, bench press.
- 1—No. 2 Cincinnati Univ., fd. range 12"x36", water att., internal att. and countershaft.

LATHES

- 1—13"x 8' South Bend L.C.G. Eng.
- 4—13"x 6' Sebastian L.C.G. Engine.
- 1—16"x 8' Bradford L.C.G. Engine.
- 1—14"x 6' Carroll-J. Q.C.G. Engine.
- 1—14"x 6' Flather L.C.G. Engine.
- 2—21"x11' LeBlond Sgl. Pulley Dr. Quick Change Gear Engine
- 2—13"x 6' Willard L.C.G. Engine.
- 3—14"x 6' Reed L.C.G. Engine.
- 1—14"x 6' Rockford L.C.G. Engine.
- 1—15"x 6' South Bend L.C.G., T.A.
- 1—14"x 6' American Q.C.G. Engine.
- 2—14"x 6' Prentice L.C.G. Engine.
- 1—14"x 6' LeBlond Q.C.G. Engine.
- 1—17"x 6' LeBlond Q.C.G. Engine.
- 1—34"x36" Lo-Swing.
- 1—17"x 6' LeBlond Cone Type Automobile, with sq. turret tool post.
- 1—18"x 6' LeBlond Stud.
- 1—19"x 8' LeBlond Heavy Duty Automobile, cone type.
- 1—17"x 8' LeBlond Automobile, cone type.
- 1—21"x10' LeBlond Automobile, cone type, square tur. tool post.
- 2—14"x 6' Reed Prentice Pl. Turning, with pan bed, (New).
- 1—25"x10' LeBlond Heavy Duty Duplex Crankshaft.
- 1—21"x12' LeBlond Line Bearing Lathe, 3-tool tur., roller bk. rest.
- 1—21"x10' LeBlond Heavy Duty Automobile Lathe, 3 step cone, double friction back gears.
- 2—21"x24"x10' LeBlond Automobile Lathes, 3-step cone, dble. friction back gear, square turret tool post.
- 1—No. 9 LeBlond multi-cut lathe.

MILLING MACHINES

- 1—Type A Briggs High duty, 16" fd.
- 1—32" Kempsmith (Lincoln Type), feed range 36"x54"x84".
- 1—No. 3H LeBlond Pl., feed range 34"x12"x20", with arbor and vise.
- 1—No. 0 Brown & Sharpe Plain.
- 1—No. 2 Brown & Sharpe plain, feed range 28"x10"x19".
- 2—No. 33 Kempsmith, single pulley drive, all-g geared, 36" tbl. fd.
- 1—No. 0 1/2 LeBlond Plain, with bk. gears.

SHAPERS

- 4—No. 6 Fellows Geared Shapers.

TURRETS, SCREW MACHINES

- 1—1"x44" P. & W. All Grd. Turret.
- 2—No. 3 Foster Friction Head Tur. Lathes, power feed to turret slide.
- 1—No. 3 Stecher Plain Head Screw Machine, wire feed.
- 1—No. 2 Warner & Swasey Plain Head Screw Machine, automatic chuck, no wire feed.
- 1—1"x15" Pratt & Whitney Turret Screw Machine, with power feed to turret.
- 1—No. 2 Warner & Swasey Hollow Hex. Turret Lathe, automatic chuck and roller wire feed.
- 1—No. 6 B. & S. Tur. Screw Mche., roller w. fd. pwr. fd. to tur. slide.

MISCELLANEOUS

- 2—12" Rochester Gear Tooth Round-ing Machines.
- 1—18" S & S Gear Tooth Rd. Mche.
- 2—4" Hurlbut-Rogers Cutting-off Machines, capacity 1/2" to 4".
- 1—Napier Metal Band Saw, cap. 6".
- 1—No. 1 Gray Sheet Metal Cutter, 3/16" capacity, 34" throat.
- 1—LaPointe Broaching Machine, capacity 1/2" square hole, screw 2 1/2" diameter, 48" long.
- 1—Bethel-Player Lapping Machine, 26" diameter plates.
- 1—No. 50 Connersville Positive Pressure Blower.
- 1—13" Gleason Bevel Gear Gen'tor.

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- 2-Bullard 24" N. E. type.
- 1-Bullard 24" rapid prod. type.
- 1-Colburn 54", 2 swivel heads.
- 1-Cleveland No. 1 horizontal.

DRILLS—Upright and Radial

- 6-Leland-Gifford 1 & 2 sp., pwr. fd.
- 1-Colburn No. 4.
- 1-P. & W. No. 1 gun barrel.
- 2-New Turner No. 3 vert. tur.
- 2-Baker No. 310.
- 1-Minster No. 2-D heavy.
- 1-Baush 6" radial.
- 1-Niles-Bement-Pond 86" Ridge-way m. d. pl. rad.

DRILLS—Multiple Spindle

- 2-Natco No. 14, 16", round hd.
- 2-Baush No. 2, 21-spindle.
- 2-Baush No. 3, 24-spindle.
- 1-Moline 4-spindle.
- 1-Moline No. 3-D 6-spindle.
- 1-Foote-Burt No. 17, 6-spindle.
- 3-P. & W. No. 11, round head.
- 10-P. & W. Nos. 3, 12, 13.

SCREW MACHINES—Automatic

- 16-B. & S. Nos. 0, 00, 2, 2G full auto.
- 1-B. & S. No. 19.
- 14-Gridley 4-spindle. 1", 1 1/2", 1 3/4", 7/16", 2 1/2", 2 3/4".
- 2-Gridley 4 1/2", 3 1/2" S. S.
- 5-Cleveland 1", 1 1/2", 1 3/4", 1 1/2", 2 1/2" A.
- 2-Cleveland 1 1/2" Model B.
- 1-Cleveland 7 1/4" A.
- 1-New Britain 1 1/2"x7 bar.
- 10-New Britain Nos. 23, 24, 33.
- 2-National Acme No. 52, 54.

MILLING MACHINES

- 1-Becker No. 7 duplex.
- 1-Newton duplex.
- 2-Hendey No. 1 universal.
- 1-Milwaukee No. 2-B univ.
- 4-Briggs "B" plain.
- 2-Rockford No. 1 1/2, No. 2.
- 4-Cincinnati Nos. 2, 3, and 4 plain, cone drive.
- 1-H. & S. No. 2, 2B, 3B, 4 plain.
- 1-B. & S. No. 13-B plain.
- 1-Milwaukee No. 1 1/2B vert.
- 2-Taylor & Fenn vertical.
- 12-Becker Nos. 3H, 4B, AB, 5C. C vertical.
- 9-P. & W. 4 1/2"x12; 6x48; 6x80 Thread.
- 4-Lees Bradner Nos. 4, 6 thread.
- 25-P. & W. No. 5 auto.
- 30-P. & W. No. 4 spline.

GEAR CUTTERS

- 20-Barber-Colman Nos. 3, 12.
- 4-Hercules 8".
- 7-B. & S. 3x36, 3x25, 4x36.
- 3-G. & E. No. 18-H.
- 2-G. & E. No. 36-ST, 3 and 4 spindle gear roughers.
- 1-G. & E. 34" combined spur and bevel.
- 20-Fellows Nos. 61, 6, 615.
- 20-Gleason bevel, 6", 11", 18".
- 1-Gleason 15" spiral rougher.

PLANERS

- 7-Putnam 26x26x 8', 2 heads.
- 1-Gray 38x38x20', 3 heads.
- 1-Putnam 48x48x12', 2 heads.

GRINDERS

- 1-Queen City 14x72 plain.
- 7-Norton 6x32, 10x36, 16x36.
- 1-Springfield 12x12x48 vertical.
- 1-Diamond 84" guide bar grinder.
- 1-Diamond No. 1 auto. surface.
- 1-Persons & Arter 12" surface.
- 4-Cincinnati No. 2, 12x36.
- 1-Landis 14x48 crank.
- 1-Landis 14x48 crank.
- 1-Fitchburg 12x54.
- 11-Bryant No. 20 chucking.
- 3-Bryant No. 15, dbl. spindle.
- 28-Heald Nos. 65, 60 and 70.
- 1-Van Norman No. 34.

TURRET and SCREW MCHS.

- 10-New P. & W. 7/16", 1" wire fd.
- 10-W. & S. No. 1 wire feed.
- 1-W. & S. No. 4 universal.
- 4-Greenlee 2 1/2"x26" Turret.
- 4-J. & L. 2x24 and 3x36.
- 1-Libby 2 1/2", 4" hole.
- 1-New Milholland No. 4.
- 5-Foster No. 4 screw.
- 40-B. & S. Nos. 6, 2, 6, wire feed.
- 1-Acme Fox Monitor.
- 1-W. & S. No. 6 b. g. p. f.
- 12-P. & J. Nos. 5A and 6A.

LATHES

- 5-American 14x6, 16x5, s. p. d.
- 10-New South Bend 15x5, 18x5 gap.
- 2-Mueller 18x3, q. c. g.
- 1-American 18x10, q. c. g., s. p. d.
- 2-LeBlond 21x12 automobile.
- 1-LeBlond No. 6 multi-cut.
- 3-LeBlond 26x10 duplex crank.
- 1-Bridgeford 26x12, q. c. g.
- 3-Bridgeford 26"x12", cone pul.
- 1-Greaves-Klusman 28x10.
- 1-Johnson 30x12, motor drive.

Also 500 other tools, such as Shapers, Presses, Belt Cutters, Broaching Machines, Hot and Cold Saws, Punches and Shears, etc.

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- 30"x30"x6' Gray Planer, Heavy Duty, 2 heads, excellent.
- 36"x36"x16' Niles-Bement-Pond, Planer 4hds. mtr. rev. drive.
- 48"x48"x14' Woodward Powell Planer, 4 heads, belt drive.
- No. 2 Brown & Sharpe Geared Head Miller, motor drive.
- No. 3 Brown & Sharpe Geared Head Miller, motor drive.
- 200 Beaudry Power Hammer.
- 18"x8' Whitcomb Blaisdel Lathes, q. c. g., d. b. g.
- Two Pratt & Whitney Turret Lathes, like new.
- No. 2 Kempamith Universal Miller, including vert. head.
- 3' Bar Betts Horizontal Mill, Geared feeds.
- 20" Cincinnati Back Geared Shaper.
- 48" Brown & Sharpe Gear Cutter, single pulley drive.
- 14"x8' Prentice Lathe, quick change gear.
- 4' Cincinnati-Bickford Radial Drill.

If what you require isn't listed above, write us and we will quote at once.

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- 1 Union lathe chuck 15"x3 jaw scroll comb. No. 83.... 65.00
- 1 Union lathe chuck 15"x4 jaw Independent No. 118.... 40.00
- 1 Union lathe chuck 18"x4 jaw Independent No. 118.... 55.00
- 1 Union lathe chuck 20"x4 jaw Independent No. 118.... 64.00
- 1 Union lathe chuck 22"x4 jaw Independent No. 118.... 74.00
- 2 Cushman lathe chucks 4"x3 jaw gear scroll No. 1 jaw No. 31 \$17.00
- 3 Cushman lathe chucks 15"x4 jaw Independent No. 12... 40.00
- 3 Whiton lathe chucks 2 1/2"x3 jaw S. D. gear scroll No. 1 jaw \$13.00
- 1 Whiton lathe chuck 4"x3 jaw gear scroll, 2 sets jaws... 17.00

Hill, Clarke & Co., Inc.

156 Oliver St.,

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REAL BARGAINS!

18"x8' Cincinnati Q. C. G. Lathe, complete.....	\$275.
Pratt & Whitney 14"x6' Tool Room Lathe, complete.....	225.
Pratt & Whitney Screw Machine, complete, wire feed.....	125.
Lodge & Davis 14" Crank Shaper, with vise.....	155.
Oesterlein Miller No. 1, plain.....	200.
Avey No. 4 Ball Bearing High Speed Bench Drill.....	95.
Jarecki Bolt and Pipe Threader, 1 1/2" capacity.....	100.
20" Floor Drill Press, back geared, power feed.....	90.
Garvin No. 2 1/2 Screw Machine, p. f. t. collets, wire feed.....	200.
Grant Motor Driven Rivet Spinner, 3/4" capacity.....	125.
Manhattan Screw Die Press, 20 ton capacity.....	175.
L. & A. Single End Punch, structural head, 8" capacity.....	150.
Hanson & Van Winkle Buffing Lathe, 1 1/2" spindle.....	45.
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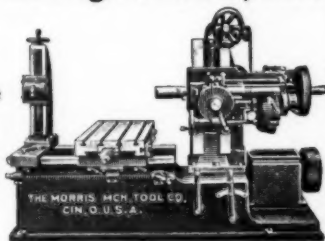
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We have several practically new 4' Radials, and Lathes from 14" to 24". Prices quoted on request.

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- 1—Curtis & Curtis Co's Forbes 8" Pipe Threading Machine on stand, for belt drive, with countershaft and full set of chasers up to 8" capacity.
- 1—Gardner No. 16 Pattern Maker's Disc Grinder with 23½" diam. steel discs, work table and countershaft.
- 1—Schumacher & Boye 32" raised in sand to 36"x32' bed, Q. C. G. Engine Lathe, with double back gear, compound rest, steady rest, full swing rest, large and small face plates, 28" 4-jaw Independent Chuck fitted, motor driven with General Electric 15 H. P., 220-volt d. c. motor, apron control, centers and wrenches.
- 1—Diamond Machine Co's Gorton 18" Double Disc Grinder, with countershaft, work table at each end of machine with discs and press for gluing on emery cloth.
- 1—LeBlond 21"x10' Q. C. G. Engine Lathe, with 3-step cone, d. f., b. g., compound rest, steady rest, large and small face plates, tool posts and 20" 4-jaw Independent Chuck fitted, centers and wrenches, and with double friction countershaft.
- 1—Greenerd No. 3½ Arbor Press on stand.

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1", 2½" and 4" Acme Upsetters.
2" National Upsetter, steel bed.
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30, 50, 75, 100, 200, 500 lb. Bradley Upright Hammers.
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2000 lb. Erie Steam Forging Hammer.
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30"x 14' LeBlond, q. c. g.
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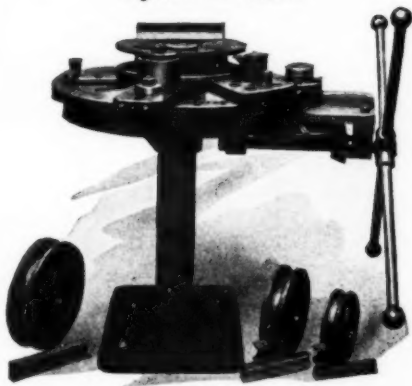
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Independent Pneumatic Tool Co., 800 W.
Jackson Blvd., Chicago
Porter-Cable Machine Co., Syracuse, N. Y.
Stow Flexible Shaft Co., Philadelphia, Pa.
Strand Co., N.A., 5501 N. Lincoln St., Chgo

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Thompson Grinder Co., Springfield, Ohio

Grinding Machines, Tap

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Mich.

Grinding Machines, Tool

Taylor & Fenn Co., Hartford, Conn.

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Thompson Grinder Co., Springfield, Ohio

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Peerless Machine Co., Racine, Wis.

Hack Saw Machines

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Peerless Machine Co., Racine, Wis.
Racine Tool & Machine Co., Racine, Wis.

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Hammers, Riveting

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Cincinnati Lathe & Tool Co., Cincinnati, O.
Cisco Machine Tool Co., Cincinnati, O.
Hardinge Brothers, Inc., 1770 Berteau Ave.,
Chicago
LeBlond Mch. Tool Co., E. K., Cincinnati, O.
Monarch Machine Tool Co., Sidney, O.
Porter-Cable Machine Co., Syracuse, N. Y.
Sidney Machine Tool Co., Sidney, O.
Springfield Machine Tool Co., Springfield, O.

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Lathes, Gap

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For Precision and Production



No. 1 Plain and Surface Grinder (Micrometer Adjustment)

Grinding wheels.....	8"x1"
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Height to spindle center.....	40"
Table surface.....	8"x14"

Has vertical travel of 12" on guides, $\frac{3}{4}$ " by micrometer, and may be raised to within 2" of spindle center. Wheel grinds to center of a surface 9" wide.

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PRICE.....	\$115.00

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La Salle, Illinois, U. S. A.

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